

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION

i4i LIMITED PARTNERSHIP * Civil Docket No.
* 6:07-CV-113 (LED)
VS. * Tyler, Texas
*
* May 12, 2009
MICROSOFT CORPORATION * 1:15 P.M.

TRANSCRIPT OF TRIAL
BEFORE THE HONORABLE LEONARD E. DAVIS
UNITED STATES DISTRICT JUDGE
AND A JURY

APPEARANCES:

FOR THE PLAINTIFF: MR. GORDON WHITE
MR. KEVIN BURGESS
MR. JOHN CAMPBELL
MS. GRETCHEN HARTING
McKool Smith
300 West Sixth Street
Suite 1700
Austin, TX 78701

MR. DOUGLAS CAWLEY
MR. JEFFREY CARTER
MR. TOM FASONE
MR. JONATHAN YIM
MR. JOHN CURRY
McKool Smith
300 Crescent Court, Suite 1500
Dallas, TX 75201

APPEARANCES CONTINUED ON NEXT PAGE:

COURT REPORTERS: MS. SUSAN SIMMONS, CSR
MS. JUDITH WERLINGER, CSR
Official Court Reporters
100 East Houston, Suite 125
Marshall, TX 75670
903/935-3868

(Proceedings recorded by mechanical stenography,
transcript produced on CAT system.)

APPEARANCES CONTINUED:

FOR THE PLAINTIFF: MR. ROBERT M. PARKER
Parker Bunt & Ainsworth
100 East Ferguson, Suite 1114
Tyler, TX 75702

FOR THE DEFENDANT: MR. MATTHEW POWERS
Weil Gotshal & Manges
201 Redwood Shores Parkway
Redwood City, CA 94065

MR. DAVID LENDER
MR. PAUL TORCHIA
MR. STEVEN KALOGERAS
MS. ARIAN NEWELL
Weil Gotshal & Manges
767 Fifth Avenue
New York, New York 10153

MR. KEVIN KUDLAC
MS. AMBER ROVNER
MR. TODD PATTERSON
Weil Gotshal & Manges
8911 Capital of Texas Highway
Building One, Suite 1350
Austin, TX 78759

MR. ANDREW CULBERT
Microsoft Corporation
One Microsoft Way, Building 8
Redmond, WA 98052

* * * * *

P R O C E E D I N G S

COURT SECURITY OFFICER: All rise.

(Jury in.)

THE COURT: Please be seated.

All right, Mr. White you may proceed.

MR. WHITE: Thank you, Your Honor.

KEITH THOMAS, PLAINTIFFS' WITNESS, PREVIOUSLY SWORN

DIRECT EXAMINATION (CONTINUED)

BY MR. WHITE:

Q. Mr. Thomas, before our break, we were just beginning to talk about an invitation that you had received from Microsoft to become a member of the Office Development Council.

Do you recall that?

A. Yes, I do.

Q. If you would refer to Exhibit PX101, I believe you've identified this as the e-mail in which the invitation was extended to you.

A. Yes, I have.

Q. I'd like to go through a series of e-mails here, Mr. Thomas, regarding this issue, and so as to, hopefully, streamline this process.

Assume, as I refer you to each one of these e-mails, that I'm asking you to tell me, if you can identify, and then explain to the jury what it is the

1 e-mail represents, okay?

2 Now, after that e-mail was -- I mean, that
3 invitation was received, I'd like you to look at PX257.

4 What is this e-mail about?

5 A. This is an e-mail to me from Mark Belk in
6 response to my inquiry to Mark as to what was happening
7 with respect to that invitation.

8 Q. Why did you send an e-mail to Mr. Belk about
9 the invitation?

10 A. I hadn't heard any more information, and the
11 time was approaching, and I asked him what I should do
12 about this.

13 Q. And what was his response?

14 A. His response was, I take it, as an expression
15 of surprise, that no one from the Office team had been
16 in touch and to say that he would be traveling, but he
17 would check into it and get back to me.

18 Q. Now, he indicated he might be -- he indicated
19 a reason why you hadn't received the reply; is that
20 right?

21 A. I take it that there was a -- one of the
22 government representatives had been asked as well.

23 Q. Were you aware of that?

24 A. No, I was not.

25 Q. All right. Look at Exhibit 28.

1 What is that?

2 A. That is an e-mail to me from Sandy Murti, who
3 worked in context with --

4 THE COURT: If you could, lower the
5 microphone just a little bit, please. Thank you.

6 A. That is a response to an e-mail that I sent
7 to both Andy Zuckerberg and Sandy Murti, who I had been
8 told to communicate with, again, asking what was
9 happening.

10 And Sandy's reply is that the -- we closed
11 recruiting for this event last week, and I did not need
12 to plan on traveling to it, and he said that Andy would
13 follow up with me later.

14 Q. When you first received the invitation to
15 become a member of the Office Development Team, what was
16 your reaction to that?

17 A. Well, I was personally flattered to be asked,
18 and from a corporate perspective, it seemed like a good
19 way to develop a partner relationship with Microsoft.

20 Q. When you received this e-mail from Mr. Murti,
21 what was your reaction?

22 A. I think I was moderately disappointed.

23 Q. Did you receive also an e-mail from
24 Mr. Zuckerberg?

25 A. I did later.

1 Q. Would you turn to Exhibit 127?

2 A. Yes. This is that e-mail from Mr. Zuckerberg
3 apologizing for the late response and indicated that,
4 well, the council option was not available; they were
5 still interested in feedback from me; and indicating
6 that he would be in contact within the next few weeks.

7 Q. Did he ever contact you?

8 A. No, he did not.

9 Q. The invitation for you to become a member of
10 the Office Development Team, why do you think they
11 extended that invitation to you?

12 A. Well, I assumed it was in follow-up to the
13 meetings that we had on April the 18th and 19th.

14 Q. Were you ever told why they wanted you to
15 become a member of the Council?

16 A. Not explicitly, no.

17 Q. When you got Mr. Zuckerberg's e-mail, what did
18 you think about that?

19 A. Well, as I just said, I was moderately
20 disappointed.

21 Q. Were you surprised?

22 A. Well, I had already heard from Mr. Murti,
23 Sandy Murti, that the option was closed, so I was not
24 terribly surprised.

25 Q. Turn to Exhibit 22, Mr. Vulpe (sic).

1 What is this?

2 A. This is the -- Exhibit 22 is the -- an e-mail
3 from Michel Vulpe to myself and several other people at
4 i4i, indicating that Microsoft has asked for a very
5 rough order of magnitude estimate for integrating
6 S4/TEXT on our product with Microsoft Products' BizTalk
7 and S4/Enterprise with Sharepoint.

8 Q. What did that mean, integrate S4/TEXT with
9 BizTalk?

10 A. To provide the software necessary to make the
11 two of them communicate in a working environment.

12 Q. Who made the request to i4i for that
13 proposal?

14 A. That came from Microsoft from Mark Belk.

15 Q. And did Microsoft (sic) submit a proposal in
16 response to the request?

17 A. i4i submitted a proposal in response to the
18 request, yes.

19 Q. I'm sorry. I apologize.

20 Did i4i make such a proposal?

21 Look at Exhibit 260. Is this an e-mail from
22 Mr. Belk that indicates he received that proposal?

23 A. That is, yes.

24 Q. And did you prepare that proposal?

25 A. I was involved in doing the final

1 documentation of the proposal, yes.

2 Q. Did i4i ever hear back from Belk regarding
3 your proposal?

4 A. We had no formal response on the proposal,
5 but we do know that it was used in a presentation to the
6 Defense Intelligence Agency.

7 Q. Would you look at Exhibit 16 and tell me if
8 you can identify that document?

9 A. Yes. This is an e-mail from John Tulley to
10 several of us at i4i.

11 Q. It says a heads up. What was that about?

12 A. This is alerting us that Microsoft wanted us
13 to prepare a demo of the Tagless Editor using the DTD
14 for the intelligence community markup language.

15 Q. What is a DTD?

16 A. It's document-type definition. It's a set of
17 rules for an XML document.

18 Q. Now, there's been some testimony so far about
19 S4/TEXT providing valid XML to the Desktop.

20 Is the DTD in any way connected with
21 providing valid XML to the Desktop?

22 A. Yes. The DTD is the set of rules against
23 which validity is judged.

24 Q. And that was a feature of the i4i products?

25 A. That is correct.

1 Q. Would you turn to Exhibit 16?

2 A. 16?

3 Q. 16, yes.

4 Are you there?

5 A. 16, yes. The heads up -- the heads up
6 e-mail.

7 Q. Okay. Exhibit 261, what is this?

8 A. This is an e-mail from Mark Belk to me. This
9 is a cover e-mail to returning the slides, the briefing
10 slides, that he did with the Defense Intelligence
11 Agency.

12 Q. Now, were those briefing slides attached to
13 the e-mail?

14 A. They were.

15 Q. Do you know how many demonstrations Microsoft
16 made to the DIA and used the portion of the information
17 that i4i provided to Mark Belk?

18 A. In the -- somewhere in May, I believe, about
19 the 20th of May, there was a demonstration to management
20 of the DIA using the DTD and the modified version of the
21 tag -- or the customized version of the Tagless Editor
22 that we provided in response to the first e-mail.

23 And then there was, in the August timeframe,
24 a briefing to DIA management using the information we
25 had provided in response to the request for a very rough

1 order of magnitude estimate.

2 Q. The presentation slides that Mark Belk
3 forwarded to you in this exhibit, were they from the
4 second demonstration?

5 A. They were from the second.

6 Q. Would you take a look at the second slide of
7 this presentation?

8 That's the one with Production No. 8071. Do
9 you have that?

10 A. I have that.

11 Q. On the screen, we have enlarged a center
12 portion of that slide.

13 Would you explain to the jury what you
14 believe is being illustrated there?

15 A. This is illustrating the integration of
16 S4/TEXT into the Microsoft Office Professional
17 environment to fit into a Microsoft infrastructure
18 proposal for handling intelligence processing.

19 Q. Is this, in your estimation, a demonstration
20 that the i4i S4/TEXT was being integrated into the
21 Office Professional suite?

22 A. That integration was being proposed to the
23 DIA, yes.

24 Q. Does anything in this slide suggest to you
25 that Microsoft was promoting i4i to the Defense

1 Intelligence Agency as a partner?

2 A. Certainly in the presence of the i4i S4/TEXT
3 and later in the presentation towards the end, there are
4 a couple of slides, which are very explicit.

5 Q. What's the date of this Exhibit 261?

6 A. The e-mail is dated August 15, 2001.

7 Q. Did i4i ever receive any other communications
8 from Microsoft in -- in 2001 or subsequent?

9 A. We had no formal response that I'm aware of
10 to any of the information that we provided for these
11 demos or to the proposal.

12 MR. WHITE: I pass the witness.

13 THE COURT: All right.

14 Cross-examination.

15 MR. LENDER: Thank you, Your Honor.

16 CROSS-EXAMINATION

17 BY MR. LENDER:

18 Q. Good afternoon, Mr. Thomas.

19 The product that i4i sold to work with
20 Microsoft Word was called S4/TEXT and sometimes Tagless
21 Editor?

22 A. That is correct.

23 Q. And the product is now referred to as X40?

24 A. That is correct.

25 Q. And it's referred to as an add-in product to

1 work, because it works on top of Word, correct?

2 A. That is correct.

3 Q. And because i4i sold its product to work on
4 top of Word, you know that people at i4i kept up on the
5 features included within Word?

6 A. That is correct.

7 Q. It's fair to say that it was part of your job
8 to keep up on developments within Microsoft?

9 A. That was not part of my job after I became a
10 specialist, but, yes, there were people who did that.

11 Q. In the 2001 time period, the period that you
12 talked mostly about during this trial, that was part of
13 your job, right?

14 A. Yes.

15 Q. And, in fact, in 2000/2001/2002 and all the
16 way up through 2003, people at i4i stayed on top of
17 Microsoft's XML developments, because it concerned i4i's
18 own business plans, correct?

19 A. We certainly stayed on top of the
20 developments, yes.

21 Q. Now, we -- you obviously talked a little bit
22 about your meetings and conversations with Mark Belk.
23 To be clear, Mr. Belk was not a technical person,
24 correct?

25 A. I'm not quite sure of his technical

1 background, so I can't say yes or no to that.

2 Q. In your interactions with him, you were
3 interacting with him as a salesperson who was
4 responsible for selling Microsoft products to the
5 government, right?

6 A. That's correct.

7 Q. And Mr. Belk told you and others about
8 Microsoft's plans with XML; isn't that right?

9 A. That is correct.

10 Q. And you understood by 2001 that Microsoft was
11 working on XML functionality, correct?

12 A. That is correct.

13 Q. In fact, in 2002, even before the product was
14 released, i4i received a beta version of the Word
15 product, correct?

16 A. To the best of my knowledge, yes.

17 Q. And that beta version was an advance copy of
18 Microsoft Word 2003, correct?

19 A. Yes.

20 Q. Now, when you learned about the XML
21 functionality included within Word 2003, you never once,
22 in 2001, 2002, 2003, 2004, 2005, or 2006 ever accused
23 them of infringing the '449 patent; isn't that right?

24 A. That is correct.

25 Q. You're not aware of any communications by i4i

1 before the filing of this lawsuit where you accused
2 Microsoft of infringing the '449 patent; isn't that
3 right?

4 A. I am not aware of any such communications;
5 that is correct.

6 Q. To the contrary, when Microsoft announced
7 that it was including additional XML functionality in
8 its Word product, rather than thinking that Microsoft
9 was infringing, i4i actually thought that the XML
10 functionality added to Word 2003 would create
11 opportunities for them; isn't that right?

12 A. That is my understanding, yes.

13 MR. LENDER: Your Honor, I only have one
14 exhibit, but if I may approach?

15 THE COURT: Yes.

16 Q. (By Mr. Lender) Mr. Thomas, I'm handing you a
17 copy of a document we've marked as Defendant's Exhibit
18 2018 -- 2018.

19 Mr. Thomas, Defendant's Exhibit 2018 is an
20 internal memo written by i4i, dated June 5th, 2003,
21 regarding Microsoft's Office 11?

22 A. So it appears, yes.

23 Q. And Office 11, you know that's another way of
24 describing Word 2003, correct?

25 A. Correct.

1 Q. And by this point in time, as it states in
2 the second paragraph below, i4i position --

3 MR. LENDER: Bring that up, please.

4 A. Yes.

5 Q. (By Mr. Lender) -- that i4i had, in fact,
6 tested its beta copy that it got of Microsoft Word 2003,
7 correct?

8 A. Yes, that is correct.

9 Q. And what i4i thought, after it tested this
10 advanced copy of Word 2003, is that in the top
11 paragraph, having Microsoft in the marketplace would
12 validate the market, correct?

13 A. That is correct.

14 Q. And if we turn to the second page, what i4i
15 thought, after testing this advanced copy of Word 2003,
16 in the last paragraph, i4i thought that Microsoft's
17 entry into the marketplace would create more
18 opportunities, as it validated the market?

19 A. That is correct.

20 Q. It also thought that there would be
21 opportunities for implementation of i4i technology in
22 Office 11 to make it work for customers; isn't that
23 right?

24 A. That is correct.

25 Q. Now --

1 MR. LENDER: Can you please put up
2 Plaintiffs' Exhibit 630?

3 Q. (By Mr. Lender) Now, Mr. Thomas, I'm not
4 going to go in -- in much detail in this document. The
5 jury's already heard multiple witnesses talk about this
6 document. This is the document that talks about our
7 patent being a red herring.

8 Do you remember you had those conversations a
9 moment ago?

10 A. Yes, I do.

11 Q. There are two things I wanted to make clear,
12 though, about your testimony about this document.
13 When i4i's lawyer asked you about this document and
14 asked you whether S4 was buggy, I believe I wrote down
15 what you said was that, no, that it was more reliable
16 and effective.

17 Do you remember that testimony?

18 A. I do.

19 Q. So just so we're clear --

20 MR. LENDER: If you can just highlight
21 the parenthetical where it starts with the fact.

22 Q. (By Mr. Lender) So today in this courtroom,
23 you're saying that S4 was more reliable and buggy -- I'm
24 sorry -- was more reliable and effective, even though
25 nine years ago, back in 2000, what you actually wrote

1 was that the versions were buggy and error-prone; isn't
2 that right?

3 A. I believe I was referring to the earlier
4 versions of S4, Versions 2 and 3, particularly
5 Version 2.

6 Q. So you agree, then, that the earlier
7 versions, the versions that you talked about that
8 actually use the patented technology, that those
9 versions were both very buggy and error-prone?

10 A. That is correct.

11 Q. Now, the other thing you mentioned -- I think
12 that what you said that i4i is, in fact, is still
13 practicing the patent; it's just in a different layer.

14 A. That is correct.

15 Q. And then you talked about something like
16 taking a washing machine and putting it upstairs.

17 A. I didn't use that particular analogy, no.

18 Q. Okay. Well, let me ask you this: Today
19 you're saying that, but in 2000, it's pretty clear that
20 what you said was that we did not base Version 4 on the
21 concepts of the patent.

22 Isn't that what you wrote?

23 A. That is exactly correct, yes.

24 Q. Okay. Thank you.

25 Now, when you started working at i4i in

1 November of 1997, the S4 --

2 MR. LENDER: You can put this down.

3 Q. (By Mr. Lender) When you started working for
4 i4i in November of 1997, the S4 processing engine,
5 Version 1, had already been developed; is that right?

6 A. That's correct.

7 Q. And it was already installed at Newbridge
8 Networks?

9 A. That is correct.

10 Q. And so that there's no dispute and no
11 disagreement and no ambiguity, your view is that the
12 product that was installed at Newbridge Network, S4,
13 Version 1, that that uses the patented technology,
14 right?

15 A. It was at Newbridge Networks. I believe
16 Version 2; and, yes, otherwise, this is correct.
17 Okay. Thank you.

18 Q. Now, we've heard some testimony about the
19 SEMI product. To be clear, you don't have any knowledge
20 about what kind of software system was delivered to
21 SEMI, correct?

22 A. No. That was before I had any involvement
23 directly.

24 Q. Now, Mr. Thomas, in opening statements, Mr.
25 Cawley stated or suggested that Microsoft would somehow

1 make i4i's product obsolete.

2 You don't agree with that, correct?

3 A. At this point, I cannot agree with that, no.

4 Q. And the reason why you don't agree with that
5 is because you know that over the past several years i4i
6 has focused its product on the pharmaceutical business,
7 correct?

8 A. That is correct.

9 Q. In fact, the jury has heard -- and I want you
10 to just tell me if you agree -- that any percent of
11 i4i's customers are actually in the pharm space; is that
12 right?

13 A. That sounds approximately right. I don't
14 have the exact numbers. I haven't seen them.

15 Q. In the pharmaceutical space where i4i has
16 focused its efforts, Microsoft's Word 2003 and 2007 have
17 not really impacted i4i's sales; is that right?

18 A. I don't know. I've -- I'm not responsible
19 for sales or sales figures, and I cannot answer that
20 question honestly.

21 Q. Well, let me ask you this question: In a
22 pharmaceutical space where i4i has focused its efforts
23 for many years, it's your position and you agree that
24 Microsoft and i4i do not compete; isn't that correct?

25 A. I'm not a salesperson, and I don't understand

1 the marketing issues involved in that question.

2 I do not see a Microsoft product that
3 competes with us directly, so, in that sense, I agree
4 with you.

5 Q. I'm sorry. To be clear, it's your position
6 that neither Microsoft Word 2003 or Microsoft Word 2007
7 today competes directly with i4i's product?

8 A. That is correct.

9 Q. Thank you.

10 Now, let's spend a little time and talk about
11 the meetings that you had in April of 2001 with
12 Microsoft. Those meetings took place at Microsoft's
13 Federal Sales offices, correct?

14 A. That is correct.

15 Q. And two of the people that you recall meeting
16 with were the salespeople, Mark Belk and Susie Adams?

17 A. That is correct.

18 Q. And you also mentioned, I think, Margie
19 Reynolds and Lisa Ruff?

20 A. Those are names that I recall, yes.

21 Q. Those folks were also responsible for selling
22 products to the U.S. government?

23 A. That's correct, I think.

24 Q. And then I think you also mentioned that
25 there was a second short meeting, maybe 15 to 30

1 minutes, with Brian Jones and others?

2 A. That is correct.

3 Q. Let's -- let's just pull up quickly the
4 presentation that you gave to those folks to Mark Belk,
5 Susie Adams. That would be Plaintiffs' Exhibit 20.
6 And this is the -- the presentation that you spoke about
7 in your direct examination, correct?

8 A. That is correct.

9 Q. And this presentation was the standard
10 presentation that you gave to lots of different
11 customers and potential customers of i4i, correct?

12 A. Yes.

13 Q. And you indicated in response to i4i
14 counsel's questions that there was nothing confidential
15 contained in this document?

16 A. That is correct.

17 Q. In fact, you never told Microsoft that
18 anything was confidential in this document, correct?

19 A. That's correct.

20 Q. This presentation was based entirely on
21 publicly available information, correct?

22 A. That is correct.

23 Q. Now, in the second short meeting that you had
24 with Brian Jones and others, you had mentioned that you
25 pulled up a single slide, and I think it was Page --

1 just give me a moment -- it's Page 13 of the document.

2 A. That is correct.

3 Q. And this is the only page of this
4 presentation that you showed to Brian Jones, correct?

5 A. That is correct.

6 Q. And there's no reference to i4i's '449 patent
7 anywhere on this page, correct?

8 A. That is correct.

9 Q. In fact, there's no explanation of the
10 applicability or scope of the '449 patent on this paper,
11 correct?

12 A. That is correct.

13 Q. And if we look through your entire
14 presentation, Plaintiffs' Exhibit 20, we won't find a
15 single reference to the '449 patent, correct?

16 A. That is correct.

17 Q. Now, Mr. Thomas, it's your belief that a
18 sales kit was handed out to Microsoft at the April
19 meeting, correct?

20 A. That is my belief, yes.

21 Q. And that was just something that was handed
22 out to folks at the meeting; you didn't actually walk
23 through the sales kit, correct?

24 A. I have no recollection of them walking
25 through the kit, no.

1 Q. And to be clear, i4i does not actually know
2 today what was included in the sales kit, because the
3 originals no longer exist, correct?

4 A. That is correct.

5 MR. LENDER: Now, I want to put up
6 Plaintiffs' Exhibit 13, if I could.

7 Q. (By Mr. Lender) Plaintiffs' Exhibit 13 is a
8 copy of the i4i-At-A-Glance one-sheeter that you believe
9 may have been included in the sales kit, correct?

10 A. Yes.

11 Q. And when I was questioning Mr. Tulley, I
12 asked him whether this document was, in fact, the actual
13 document included in the sales kit, and he said yes.

14 Now, Mr. Thomas, you were i4i's corporate
15 representative regarding this document, correct?

16 A. I believe I was, yes.

17 Q. And in preparation for that deposition, you
18 looked at the file for this document, and what it
19 indicated was that the document had actually been
20 updated or changed in May of 2001, a month after the
21 meeting with Microsoft; isn't that correct?

22 A. That was the date in the file, yes.

23 Q. And sitting here today, you have no idea what
24 changes were made to this document in May of 2001, after
25 the April 2001 meeting with Microsoft?

1 A. That is correct.

2 Q. And when you tried to find out, you went and
3 spoke to folks, and folks at i4i, no one was able to
4 confirm for you that this document, when it was handed
5 to Microsoft, ever had the patent number on it; isn't
6 that right?

7 A. That is correct.

8 Q. Okay. Let's turn for a moment and talk about
9 the meeting, that short 15- to 30-minute meeting with
10 Brian Jones and others.

11 This meeting took place after the meeting
12 that you had with Mark Belk and Susie Adams, correct?

13 A. That took place the day following, yes.

14 Q. And you noted that you gave a short
15 demonstration to these folks?

16 A. Yes.

17 Q. And the demonstration that you gave, that's
18 the standard demonstration that you gave to other
19 customers and potential customers, correct?

20 A. That is correct.

21 Q. And I think you -- you -- you mentioned
22 during your direct that they asked some good questions.
23 But sitting here right now, you can't recall any of the
24 questions they actually asked, correct?

25 A. I don't remember any of the questions, no.

1 Q. And in this short meeting with Brian Jones
2 and other folks on the Word team, you never told them
3 that i4i had a patent; isn't that right?

4 A. That is correct.

5 Q. And during any of your meetings with
6 Microsoft, i4i never told Microsoft any detail about the
7 '449 patent or what it covered, correct?

8 A. I believe that John Tulley's presentation on
9 the 18th included a reference to the patent. I do not
10 believe it included the patent number.

11 But in response to your specific question, I
12 don't think we told them any details of the patent.

13 Q. And you never discussed actual claims of the
14 patent either, correct?

15 A. That's correct.

16 Q. In fact, i4i never said to Microsoft, for
17 example, that i4i's patent was involved in creating a
18 map of metacodes, correct?

19 A. That is probably true; I did not say that.

20 Q. You never gave anyone on Microsoft's Word
21 Development Team any of the source code for i4i's
22 product, correct?

23 A. None of the source code for the DataPipe
24 layer or any of the lower layers.

25 Q. In fact, to your knowledge, i4i never shared

1 any of its source code with anyone from Microsoft,
2 correct?

3 A. Excluding the VBA source code in the Tagless
4 Editor -- Tagless Editor layer, we did not share any
5 source code with Microsoft.

6 Q. And the VBA source code that you just
7 referred to, that has nothing to do with the '449
8 patent, correct?

9 A. That has nothing to do with the '449 patent.

10 Q. Now, after the short meeting with the -- with
11 Brian Jones and some other folks at Microsoft, you
12 accompanied Microsoft to a meeting with one of its
13 government customers. That was the SAIC?

14 A. That is correct.

15 MR. LENDER: And if you could put up
16 Plaintiffs' Exhibit 39.

17 Q. (By Mr. Lender) You may recall i4i's attorney
18 asked you some questions about PX39.

19 A. That's correct.

20 Q. And the page that he asked you about, if I
21 got it right, was Page 8 of this document.

22 MR. LENDER: And if you could just blow
23 up what Mr. White showed Mr. Thomas.

24 Q. (By Mr. Lender) And this is the -- the
25 comment that you testified about that you attributed to

1 Mr. Pratley, correct?

2 A. Uh-huh. That is correct.

3 Q. Well, do you know what the question was that
4 was being asked that Mr. Pratley was answering in this
5 question?

6 A. I do not believe that a specific question was
7 being asked, because it was a general forum discussion.
8 There might have been a specific question on the table,
9 but Mr. Pratley was talking about a range of things.
10 And my notes here are cryptic.

11 Q. Right. They are cryptic; I agree with that.
12 But right before the section of your notes that you were
13 asked some questions about, there is, in fact, a
14 question, and the question is: Authoring DTD or schema,
15 question mark.

16 Do you see that?

17 A. That's correct.

18 Q. And that's referring to authoring or writing
19 a DTD document-type or schema from scratch, correct?

20 A. In my recollection, no. I recall that that
21 was asking as to whether or not the basis for authoring
22 in Word XML would be based on a DTD or an XML schema.

23 Q. Well, let me ask you this: You're recalling
24 that from memory today?

25 A. I am.

1 Q. And let's just be clear.

2 Authoring a DTD or schema, that is not about
3 opening an XML document containing custom XML Word,
4 correct?

5 A. That is correct.

6 Q. And you understand that there is, in fact, no
7 functionality contained within Word to author or create
8 a DTD or schema, correct?

9 A. I understand that, yes.

10 Q. Thank you.

11 Oh, by the way, one other thing I wanted to
12 show you in this document, on Page 6, it's another
13 comment that Chris Pratley gave to SAIC that you wrote
14 down.

15 MR. LENDER: If you could blow that up.

16 Q. (By Mr. Lender) You see four from the bottom
17 that Chris Pratley also said to the SAIC -- he talked
18 about the history of development being more important
19 than reusing content.

20 Do you see that?

21 A. That is not Mr. Pratley. What Chris spelled
22 out is Mr. Whedleton.

23 Q. Mr. Whedleton?

24 A. Yes, from SAIC.

25 Q. Mr. Whedleton from the SAIC?

1 A. That is correct. That's how I distinguished
2 between the two of the notes.

3 Q. Thank you very much.

4 MR. LENDER: You can put that away for a
5 moment.

6 Let's put up Plaintiffs' Exhibit 22,
7 please.

8 Q. (By Mr. Lender) Now, Plaintiffs'
9 Exhibit 22 --

10 MR. LENDER: If you can blow up the first
11 paragraph, please.

12 Q. (By Mr. Lender) This is what i4i's attorney
13 asked you some questions about right when we came back
14 from lunch. And this is a reference to the VROM, the
15 rough order of magnitude that you refer to?

16 A. That is correct.

17 Q. And this rough order of magnitude dealt with
18 a product called BizTalk, correct?

19 A. That is correct.

20 Q. And BizTalk is not accused of infringement in
21 this case; is that correct?

22 A. It is not accused of infringement.

23 Q. It's a completely different product than
24 Microsoft Word?

25 A. That is correct.

1 Q. Just a few more things, Mr. Thomas.

2 Mr. Thomas, we've obviously discussed in your
3 direct examination and just now meetings and discussions
4 between Microsoft and i4i that occurred in the April
5 2001 time period, correct?

6 A. (Nods head affirmatively.)

7 Q. And we discussed there was some information
8 provided from i4i to Microsoft, and, of course, there
9 was some information provided by Microsoft to i4i,
10 correct?

11 A. (No audible response.)

12 Q. To be clear, i4i is not saying in this case
13 that Microsoft copied anything from i4i, correct?

14 A. We are not saying that as far as I know.

15 Q. Thank you.

16 MR. LENDER: No further questions.

17 THE COURT: All right. Redirect?

18 REDIRECT EXAMINATION

19 BY MR. WHITE:

20 Q. Just a couple of questions, Mr. Thomas.
21 Even though Microsoft may not have copied your source
22 code and the invention, they nonetheless can infringe
23 the U.S. patent; is that correct?

24 A. That is my understanding.

25 Q. That's your understanding of U.S. patent law?

1 A. That is my understanding, yes.

2 Q. They didn't have to copy, and we don't have
3 to prove copying, correct?

4 A. That's my understanding.

5 Q. Now, you were asked about what happened in
6 the year 2002 when Microsoft announced the beta version
7 release of Office 11.

8 Do you recall that?

9 A. Yes, sir, I was.

10 Q. And you were asked a series of questions
11 concerning the fact that i4i monitored developments from
12 Microsoft.

13 A. Yes.

14 MR. WHITE: Can I have my slide -- that's
15 Slide No. 3 -- of Mr. Thomas' demonstratives?

16 Q. (By Mr. White) I refer you to one of your
17 slides, Mr. Thomas, and particularly to the connection
18 between the application layer of S4/TEXT and Microsoft
19 Word.

20 A. I see that.

21 Q. You indicated that S4/TEXT would bind the
22 S4/TEXT source code to the Microsoft Word product?

23 A. That is correct.

24 Q. How does that -- how is that done?

25 A. That is by rating source code that utilizes

1 the programming interface provided by Microsoft Word.

2 Q. Are those called APIs?

3 A. APIs, yes.

4 Q. Application program interface?

5 A. Yes.

6 Q. Are those a series of commands that are made
7 available to people that want to develop software to
8 work with Word?

9 A. That is correct.

10 Q. How important are those to i4i?

11 A. Well, the exact configuration and behavior of
12 each of those calls is important in shaping how the
13 application layer talks to Microsoft Word and how it
14 listens to messages that come back.

15 Q. If Microsoft were to announce a revision,
16 change, that modified those APIs, would that impact in
17 any way i4i?

18 A. That could impact very severely. It could
19 mean rewriting a lot of application layer code.

20 Q. Was it, in fact, the intent of i4i to monitor
21 what Microsoft was doing to be sure that its product
22 would remain compatible with subsequent releases?

23 A. That was the main intent of that activity,
24 yes.

25 Q. And now counsel said that, in fact, because

1 you were a member of the MSDN network, you would receive
2 a copy of the advanced copy of the Word program or the
3 Office Suite when announced; is that correct?

4 A. That is correct.

5 Q. Did Microsoft provide i4i with the source
6 code of its Word product?

7 A. On no occasion did it provide --

8 Q. What did it provide to you?

9 A. It provided the executables and the
10 documentation for how to use the interface.

11 Q. And what can you do with the executables?

12 A. You can interact with them through the
13 profile -- provided means. From the programming point
14 of view, it's like a user. You can install the product
15 and use it through the interface provided. You have no
16 idea what's on the inside.

17 Q. Could you, from that copy of the executable,
18 determine what the internal data structures were within
19 Word and how it was performing the functions?

20 A. Absolutely not.

21 Q. Did you ever obtain a copy of the source
22 code, prior to the filing of this lawsuit, that told you
23 what was internal to the Word program?

24 A. We have never seen the source code of Word.

25 Q. What does that leave you with? Guessing?

1 A. That leaves us with essentially supposition,
2 yes.

3 Q. Now, they made a point in asking you during
4 your presentation to the Word XML team at that morning
5 of the 19th.

6 Do you recall that?

7 A. Yes.

8 Q. And you looked at your architectural slide of
9 your S4/Tagless Editor, right?

10 A. Correct.

11 Q. And they said that nowhere in that slide did
12 you say that this patent -- that that was covered by a
13 patent; is that correct?

14 A. It doesn't say that on the slide.

15 Q. The i4i-For-A-Glance (sic) document that was
16 handed out to Microsoft did have the patent number?

17 A. To the best of our belief, yes.

18 Q. And that the production that Mr. Tulley made
19 to Microsoft said that this was patented technology?

20 A. That is correct.

21 Q. How many patents does i4i have in the United
22 States?

23 A. Exactly one.

24 Q. Is that a matter of public record?

25 A. That is a matter of public record.

1 Q. Could Microsoft just actually get on the
2 internet and do a quick search and determine that i4i
3 had a patent?

4 A. Yes.

5 Q. And it would be the one that's in litigation
6 in this case?

7 A. That is very easy to do, sir, yes.

8 Q. So they had all the tools to figure out what
9 patent i4i had, correct?

10 A. That is correct.

11 Q. To your knowledge, do you know if i4i (sic)
12 ever took the effort to try to find out if i4i had a
13 U.S. patent?

14 A. I have no knowledge of what Microsoft may or
15 may not have done in that case.

16 Q. Now, you have testified that you had an
17 understanding of what the invention of the '449 patent
18 was that really determined how you wrote about and
19 talked about the patented technology; is that right?

20 A. That is correct.

21 Q. And I believe you testified that that
22 understanding was basically that I've got a mapped
23 content -- I mean, a metacode map, a mapped content in
24 which they are linked together.

25 A. That is correct.

1 MR. WHITE: Now, can I have that
2 presentation of the architecture? That's Exhibit 20, I
3 believe.

4 Q. (By Mr. White) Do you see this slide? This
5 is the one you used to make your presentation to the
6 Microsoft Word XML team.

7 A. That is correct.

8 Q. By the way, do you know what the position
9 within Microsoft, those individuals who attended your
10 presentation, had at the time you made it?

11 A. Not explicitly, no.

12 Q. Do you know whether they were in upper-level
13 management?

14 A. I don't know.

15 Q. Now, you said that you would describe to the
16 participants, or anybody that was listening, your
17 standard spiel. You would start at the bottom and work
18 up.

19 Did you describe the way in which
20 S4/TEXT/Tagless Editor maintained control over the
21 metacodes and the content of the document that was being
22 opened?

23 A. I would have described how the DataPipe layer
24 contained a map of the metacodes, contained the
25 metacodes with references to the area of use in the

1 Microsoft Word.

2 Q. Now, that sounds to me like you're describing
3 that there's been a separation of the metacodes from the
4 content; is that right?

5 A. That was certainly my intention with what I
6 said.

7 Q. Was that what peaked the interest of those
8 individuals to want to ask questions?

9 A. I can't say explicitly, but something in that
10 discussion did peak their interest, yes.

11 Q. Wasn't what you described, in essence, the
12 invention of the '449 patent?

13 A. It's certainly an abstraction of it, yes.

14 MR. WHITE: I pass the witness.

15 THE COURT: Okay. Recross?

16 MR. LENDER: No, Your Honor.

17 THE COURT: Thank you. You may step
18 down.

19 All right. Who will be Plaintiffs' next
20 witness?

21 MR. CAMPBELL: i4i calls Dr. Tom Rhyne.

22 THE COURT: Dr. Rhyne.

23 MR. CAMPBELL: Your Honor, may I
24 approach?

25 THE COURT: Yes, you may.

1 MR. CAMPBELL: Your Honor, may I proceed?

2 THE COURT: Yes, you may.

3 VERNON THOMAS RHYNE, III, Ph.D., PLAINTIFFS' WITNESS,

4 SWORN

5 DIRECT EXAMINATION

6 BY MR. CAMPBELL:

7 Q. Good afternoon, sir.

8 A. Good afternoon, Mr. Campbell.

9 Q. Would you please introduce yourself to the
10 jury.

11 A. Ladies and Gentlemen, my full name is Vernon
12 Thomas Rhyne, III. I generally go by Tom.

13 Q. Okay. And can you give us an idea of why
14 you're here today?

15 A. I was asked by your law firm on behalf of i4i
16 to serve as an expert witness. And my primary focus as
17 far as what I will be talking about today is the
18 question of whether or not Microsoft, in two of their
19 products, has infringed three of the claims of this '449
20 patent that's been discussed.

21 Q. Before we get into that further, let me ask
22 you a few questions about your background.

23 Can you tell us where you live?

24 A. I live in Austin. I've lived there about
25 almost 27 years.

1 Q. Can you briefly describe your educational
2 background?

3 A. Yes. I graduated from high school in
4 LaMarque, Texas, kind of down at the southeast area near
5 Galveston. My mother worked as a schoolteacher; my
6 father worked in the oil refining businesses in Texas
7 City.

8 Upon graduation from high school, I enrolled
9 at Mississippi State. I had a small scholarship there,
10 and I completed a Bachelor of Science degree at
11 Mississippi State in 1962.

12 I then went to work for the National
13 Aeronautics and Space Administration out in Virginia, in
14 part because they had a program that let you work on
15 your master's degree while you were working for the
16 government. You went to classes in the evenings and
17 over the weekends.

18 And through that part-time program, I
19 completed a master's of electrical engineering at the
20 University of Virginia in Charlottesville in 1965.

21 Soon after that, I took educational leave and
22 went to Georgia Tech, formerly Georgia Institute of
23 Technology, and spent two years there working on my
24 Ph.D. And I finished my Ph.D. at Georgia Tech in 1967.

25 Q. Did you write a thesis for your Ph.D.?

1 A. I did. I worked on a specialized computer
2 system for detecting the electrocardiogram, the heart
3 electrical signal, of an unborn child by attaching
4 electrodes to the abdomen of the mother. And I worked
5 with cardiologists, in particular people that are known
6 as fetal cardiologists, and I developed that system.

7 It worked successfully, and as an electrical
8 engineer, I was pleased to have my first publication in
9 the American Journal of Obstetrics & Gynecology. It's
10 not a typical place for EEs to publish.

11 Q. Did you teach after you received your Ph.D.,
12 Dr. Rhyne?

13 A. I did. I went to Texas A&M University. One
14 of the gentlemen who had been a professor at Georgia
15 Tech that I had gotten to know took the position as head
16 of the Electrical Engineering Department at Texas A&M,
17 and he offered me an opportunity to come to Texas A&M
18 and start the first computer engineering program that
19 they had at that institution.

20 And I went there directly from finishing my
21 Ph.D. and stayed at A&M one way or another for almost 18
22 years on the faculty.

23 Q. And I see that you also have the Longhorn
24 logo up there. Did you also teach at the University of
25 Texas?

1 A. Yes, I did. In 1983, I took educational
2 leave. I took a leave from A&M and went to work for an
3 electronics research company in Austin. It has a long
4 name -- it had a long name. It's no longer in business.
5 It was called the Microelectronics & Computer Technology
6 Corporation, better known as MCC, for obvious reasons.
7 I stayed there for three years, and my family had really
8 liked Austin, and, basically, I was asked by A&M -- they
9 were holding a faculty slot for me there -- was I going
10 to come back or was I going to stay in Austin.

11 And we took a family vote, and it was about
12 three and a half to a half that I would stay in Austin.
13 I gave up tenure, which was kind of a scary thing to do
14 after working so hard to get it. But I stayed there.
15 And while I was in Austin, one of the reasons I enjoyed
16 going there was that I taught electrical and computer
17 engineering at the University of Texas in what they call
18 the evening school. There were lots of engineers
19 working at the companies in Austin who wanted to further
20 their education, but they had a full-time job on kind of
21 the 8:00-to-5:00 timeframe.

22 And so I would go -- since I had a full-time
23 job -- and teach in the classes that generally were
24 starting around 6:00 p.m. two or three nights a week.
25 And the classes were filled with generally older

1 students who were working in high-tech companies.

2 And to be truthful, I think I often learned
3 more than just interacting with them and the kind of
4 research and development they were doing at their
5 companies than I brought to the table. They were -- it
6 was just really an interesting opportunity for me.
7 And I taught in that position for almost nine more
8 years. I was on both faculties for three years.

9 Q. Do you also have some industry experience,
10 Dr. Rhyne?

11 A. I mentioned NASA; I mentioned MCC. I've
12 worked -- every summer when I was at the university at
13 A&M, I took off and worked in an industry that I thought
14 would be of interest both in terms of what I would do
15 but also in an interesting part of the company to move
16 my family.

17 So I worked in the Twin Cities' area. I have
18 worked in California. I've worked in Washington, D.C.
19 And it allowed me to bring some actual industrial
20 practice back to my classes. So among those kinds of
21 companies, I worked at Texas Instruments on two
22 different occasions on what's called microcomputer, the
23 little one-chip computers that are so common in all
24 kinds of products today.

25 I actually did architecture for a couple of

1 their early microprocessor products. I also worked on
2 one of their GPS systems, if you're familiar with the
3 navigational electronics.

4 I worked at Control Data. I worked at a
5 research company in California called the Electric Power
6 Research Institute, working on computerized approaches
7 to read your meter through your power lines so that they
8 didn't have to send a meter person out to your house to
9 actually read your meters.

10 So, collectively, over the 50 years since I
11 graduated from high school, I've got almost 25 years of
12 industrial experience and right at 22 years of academic
13 experience in a teaching and research position.

14 Q. Throughout your career, have you been
15 involved in a professional society?

16 A. Several, but I guess primarily the Institute
17 of Electrical and Electronics Engineers. That's called
18 the IEEE. I've been elected to be on their Board. I
19 served as their treasurer for a number of years. That's
20 the largest professional society in the world, because
21 it's international; it's not just linked to the United
22 States.

23 For example, your society, the American Bar
24 Association, is only in America. And I held a number of
25 positions over the years with the IEEE.

1 Q. As part of that involvement, have you been
2 bestowed with any honors?

3 A. I've got two that I'm extremely proud of. I
4 was elected by the members of the IEEE as what they call
5 a fellow. And that's restricted to 2 percent of the
6 membership of the IEEE at any given time.

7 It's an honor you can't nominate yourself
8 for. I didn't even know I was up for nomination until I
9 received a letter that said you've not only been
10 nominated but you've been elected.

11 And when you do that, they have a citation,
12 they call it, as to what it was you did that they liked.
13 And my citation said I was elected as a fellow for my
14 contributions to computer engineering and to computer
15 engineering -- and to the computer engineering
16 profession.

17 And then the second bullet there is an award
18 named after a gentleman who was the dean of engineering
19 at Stanford, Dr. Terman, and two of his students were
20 gentlemen named Hewlett and Packard, which you've
21 probably heard of.

22 And under his tutelage, they went out in one
23 of their garages in California and started their
24 company. And to honor him, they give an award every
25 year to the outstanding young electrical engineering

1 educator in the United States.

2 And to be qualified for that award you have
3 to have published a textbook before you were 35, and I
4 had published a very successful textbook on the basic
5 concepts of computer design. And it led to my being
6 qualified to be nominated for that.

7 Q. Do you have any professional licenses,
8 Dr. Rhyne?

9 A. I have two. I have been a registered
10 professional engineer in the State of Texas since 1969,
11 and I'm also a registered patent agent and have been for
12 right at 10 years.

13 Q. What is a registered patent agent?

14 A. It's a person who is not an attorney. If you
15 were an attorney and did the same thing, you would be a
16 patent attorney.

17 But a patent agent is an engineer or
18 scientist who has taken a test given by the Patent
19 Office, the USPTO. And if you pass that test, as I did,
20 you then are qualified to represent an inventor at the
21 Patent Office. You can work with the inventor and write
22 up their application and get the drawings set and help
23 them to define whatever claims they want.

24 And then you can send that packet of
25 information to the Patent Office and deal with the

1 Examiner during the process that, hopefully, will lead
2 to the allowance of the United States patent.

3 Q. Okay. And have you filed any patent
4 applications as a patent application?

5 A. I have done one. I've done it for my son and
6 a friend of his. My son has worked in the electronic
7 gaming industry for years and years. I tried to get him
8 not to play those things, but he finally made it his
9 profession.

10 And while he and another friend or two were
11 trying to start a small company up in New Hampshire,
12 they came up with an idea that they and I believe is
13 patentable. And so I've been dealing with the Patent
14 Office for a little over four years.

15 If you recall, the '449 patent was filed, I
16 think, in '94, and it became allowed in '98. I may take
17 longer than that. It's actually been rejected as an
18 application twice. But in the letter that we got back,
19 the so-called office action for the most recent
20 rejection, the Examiner was kind enough to offer some
21 suggestions that he thought would allow us, if we
22 modified our claims a little bit, to be able to get the
23 patent allowed.

24 And so that -- our response to that has been
25 in now for about a month, month and a half, and we hope,

1 all of us, that within the next 6 to 12 months we will
2 hear something back. We will stay with it. We're not
3 going to give up.

4 Q. Well, since you've talked about your
5 background, maybe now would be a good time to talk about
6 the '449 patent.

7 Do you understand the ordinary skill in the
8 art in this patent?

9 A. Yes.

10 Q. What's the Court's definition?

11 A. It's a person of ordinary skill in the art
12 would have a bachelor's of science degree in electric --
13 excuse me -- in computer science or electrical
14 engineering with an emphasis on computer systems, in
15 addition to two to three years of programming
16 experience.

17 Q. Why does this matter?

18 A. Well, a patent is supposed to be written, not
19 to Albert Einstein. It's not supposed to be written to
20 me, because I'm far above ordinary skill.

21 It's supposed to be written to a person who
22 has about this level of education and work experience,
23 and they're supposed to be able to read it and
24 understand it, and based on what they read, to actually
25 go out and practice the invention.

1 If it was a machine, they should be given
2 enough information, with that level of education and
3 skill and knowledge, to go build it.

4 In the case of this patent, we're talking
5 about method claims; how do you do something. They
6 should be able to figure out, from what the patent tells
7 them, how to go do that.

8 And it's also important, when you consider
9 the validity of a patent, which will -- I think will
10 probably come up later in this trial, in that sometimes
11 people propose that a patent is invalid because of
12 various combinations of known facts.

13 Judge Davis pointed out that the patent has
14 to be novel; it has to be new. And sometimes you can
15 look at a set of older stuff and say, well, if you put
16 that together like this, it would actually do the same
17 thing that your patent claims to do, and that
18 combination has to be something that would be obvious to
19 a person of ordinary skill to implement, as I understand
20 the legal aspect of arguing that obviousness has
21 invalidated a patent claim.

22 Q. And I think you already mentioned this, but
23 do you satisfy this definition as a person of ordinary
24 skill in the art?

25 A. I have degrees well past the bachelor's

1 degree. Mine is in electrical engineering with an
2 emphasis in computer systems for my master's and Ph.D.
3 degree, and I have, oh, I would say 20 to 25 years of
4 computer programming experience, far beyond two or
5 three.

6 Q. I think at the very beginning, when I asked
7 you why you're here, you mentioned that you're here as
8 an expert witness.

9 A. Yes.

10 Q. How do you differ in that way from the
11 witnesses we've heard from so far?

12 A. Well, I'm not proclaiming myself as an
13 expert, but that's the term that's used.

14 The people that you've heard so far are what,
15 as I understand the process, are called fact witnesses,
16 and they've been telling you what they recall and what
17 certain documents say.

18 As an expert, I am free to offer opinion
19 based on my facts that I -- the facts that I have
20 studied. In my case, I've studied software; I've
21 studied the patent itself and a bunch of other
22 resources. But I'm going to offer you opinions.
23 And I guess the central opinion I'll be offering today
24 is my opinion that Microsoft, with two of their
25 products, infringe three of the claims of that patent.

1 Q. Okay. Now, is this the first time you've
2 served as an expert in a patent case?

3 A. It certainly is not.

4 Q. Can you describe what your background is in
5 serving as an expert?

6 A. The first time I got asked to be an expert
7 was in the mid-'70s when an attorney from up in the east
8 had a trial in Dallas, and he came to Texas A&M and
9 walked into my office and said, I've been told that
10 you're a professor here who understands computers. And
11 he was very frank. He said it in his Texas accent.
12 And I said, well, I've got both of those. And he needed
13 an expert in that case in Dallas, and I guess he wanted
14 somebody who talks like I do.

15 And after that, I said, well, that was
16 interesting. I had never heard of being an expert in a
17 case.

18 A year and a half later, one of the attorneys
19 on the other side in that case, who had been in the
20 Court, much like Mr. Powers or some of these, called me
21 and asked me if I would like to do it again, and I said
22 yes. And it's kind of been head to tail since then.
23 And over the last 30 years or so, I've been retained as
24 an expert in well over 50 cases. And I've actually
25 testified in court -- I don't keep a running count very

1 well, but it's been at least 20 times.

2 Q. And it's probably pretty obvious by now, but
3 as part of your preparation for your testimony today,
4 did you work with some graphics folks to put together
5 some slides?

6 A. Yes. This is a PowerPoint slide set.
7 It's -- we're using a Microsoft product, I think, to
8 make this set, and I've worked with you and some graphic
9 individuals to make this set of explanatory slides, and
10 I think they will be helpful, I hope, to both me, you,
11 and to the jury.

12 Q. All right. Well, let's go through those
13 slides. Let's first talk about your responsibilities in
14 this case. What have you done?

15 A. Well, I've, obviously, studied the '449
16 patent, and I think, if we move to the next slide, we've
17 got -- this is something that I think you've already
18 seen a few times. I know that Judge Davis actually had
19 you open up your juror notebook and look at it.

20 A couple of things to point out about it
21 again, this is the number up here that's been assigned
22 by the Patent Office. As you can see, the last three
23 digits are '449. This is the 5,787,449th patent that
24 was allowed by the Patent Office.

25 The current number -- it's either at or above

1 8 million, so they've continued to go. I've kind of --
2 let me see if I can clear that.

3 This is the date when it was issued, July the
4 28th of 1998. It's always a Tuesday. I don't know --
5 that's just been the policy at the Patent Office, to
6 issue this week's patents on Tuesday.

7 You've already actually heard from Mr. Vulpe
8 and Mr. Owens. You know about their company. You know
9 that it was filed on January the 2nd of 1994, about four
10 years and a little bit before it actually was allowed.
11 And the title is the method and system for manipulating
12 the architecture and the content of a document
13 separately from each other.

14 We will not be talking about systems today,
15 but we will see that the three claims that I will offer
16 opinions about are for a method of manipulating the
17 architecture and content of the document separately.

18 Q. As we go along for the record, I'll mention
19 the exhibit numbers when you talk about a document. And
20 for the record, this is PX1.

21 A. All right. Between the two of us, we'll try
22 to remember to do that each time for the sake of the
23 record.

24 Q. I appreciate your help on that, because I
25 know I'll forget sometimes.

1 What else did you -- did you study in this
2 case?

3 A. Well, I actually had owned copies of both
4 Word 2003 and 2007 well before I was retained in this
5 case. I went back to both of those and studied the
6 manner in which they operate with this XML markup
7 language that has been discussed up to now.

8 And so I studied that operation and the
9 online help information that's provided by Microsoft as
10 to how to use them in certain ways.

11 And these two figures down -- these pictures
12 down here, this one on the left is a picture of what you
13 get when you purchase Word 2003, and this is a picture
14 of what you get when you purchase Word 2007.

15 It's probably a little hard to see, but right
16 in that area that says Office -- you may already know
17 this, but Microsoft sells a suite of tools together
18 under the Office label.

19 One of the key tools is their very successful
20 word processor, Word. If you're familiar with
21 spreadsheets, they have a spreadsheet named Excel. They
22 have the PowerPoint program that we're using here to
23 make graphics and to display them. And there are two or
24 three other programs that are in that suite.

25 So if I talk about -- you might see something

1 like Office 11 or Office 12, or in this case, this is
2 Office Word. It's part of that suite.

3 Q. Okay. And for the record, so Word 2003 is
4 PX643? That's what you get when you buy Word?

5 A. Yeah. And let me see which -- I don't --
6 which version of this --

7 MR. CAMPBELL: May I approach the
8 witness, Your Honor?

9 THE COURT: Yes, you may.

10 THE WITNESS: And could I get a little
11 bottle of water? I'm just drying out here.

12 A. Okay. I would think this is the standalone
13 version, because it doesn't specifically mark this one
14 as being professional or whatever, at least I don't see
15 it. But this is one version of Microsoft Word 2003, and
16 this is the version, Plaintiff's Exhibit -- what did you
17 say -- 644?

18 Q. (By Mr. White) Yes, sir.

19 A. This is Microsoft Office Word 2000 (sic).
20 It's the version of Word that came about four years
21 later.

22 Q. Word 2007.

23 A. Yeah. I'm sorry. 2007.

24 Q. So after you -- after you studied the patent
25 and the operation of Word 2003 and 2007, what -- what

1 did you do next?

2 A. Well, as I said, I was asked to offer
3 opinions about possible infringement. I compared the
4 claims of the '449 patent individually to Word 2003 and
5 2007, and based on that comparison, formed an opinion as
6 to whether or not Word infringes certain ones of the
7 claims of the '449 patent.

8 Q. Okay. And just -- just for the record, let's
9 be clear. There are -- there are multiple editions of
10 Office 2003; is that correct?

11 A. That's correct. On the back of the box, it
12 actually says that there's a student and teacher
13 edition, which has one set of capabilities; there's the
14 standard edition, which has the same set of
15 capabilities; there's the small business edition; and
16 there's the professional edition.

17 Q. Okay.

18 A. So I believe there are four.

19 Q. Does your opinion that you offer today apply
20 to all editions of Office 2003?

21 A. No.

22 Q. Which version -- which editions does it apply
23 to?

24 A. For the 2003 version of Word, it applies to
25 the version that you got within the professional

1 edition, and also, I believe, to the small business
2 edition as well, but not to the less capable version
3 that's called the standard edition or to the student and
4 teacher edition.

5 Q. Okay. What if you bought Word 2003 alone and
6 not as part of the Office suite? Does your opinion
7 apply to Word 2003?

8 A. Yes. The standalone version -- and as I say,
9 this may be it -- that version of Word also, in my
10 opinion, infringes the three claims that I've formed an
11 opinion about.

12 Q. Okay. Does your testimony apply to all
13 editions of Office 2007 and Word 2007?

14 A. Yes.

15 Q. Let's talk about versions. Have there been
16 multiple versions of Word 2007?

17 A. There are multiple versions out in the field
18 for most every Microsoft product.

19 Q. How do -- how do those versions get released?

20 A. Microsoft has a -- kind of a bug-fix process
21 that allows people who have purchased their product to
22 go online and receive what are called, in some cases,
23 updates, and in other cases, they call them service
24 packs.

25 And, for example, as best I recall, for the

1 2007 version of Microsoft Word, they have released two
2 service packs. But you go to an update site and check
3 to see, have there been any updates released for the
4 particular Microsoft products that you own.

5 And for the operating system, they also
6 periodically, when you prepare to turn off your
7 computer, so-call log out, you may see a note that says,
8 before we're going to let you log out, we're going to do
9 some other updates to resolve some issues that have come
10 up from people out in the field who are actually using
11 their products.

12 Q. Is it typical to provide updates or service
13 pack releases to fix bugs in software?

14 A. Yes. If you look at the details, you can get
15 information for the various service packs and updates
16 that will tell you what things they're addressing to
17 resolve.

18 For example, for the operating systems, there
19 have been a number of security issues that have been
20 exploited by viruses and hackers, and Microsoft
21 continually, in kind of a -- it's sort of an escalation.
22 As soon as they fix something, there's some malevolent
23 people out in the world who try to figure a way around
24 that, and Microsoft makes very strong efforts to take
25 care of those kinds of situations as quickly as they

1 can.

2 Q. So after you compared the claims of the
3 patent to the -- these -- these versions of Word or
4 these editions of Word and determined if they infringed,
5 what did you do next?

6 A. I wrote some lengthy reports that provided
7 the results of that analysis. I'm legally required as
8 an expert to provide to the attorneys on the other side,
9 in advance of my testimony here today, reports that set
10 forth my opinions that I will testify about, if we
11 actually get to trial, and also the bases for those
12 opinions: What did I read; what did I study; what did I
13 experiment with that say -- if I -- if I -- I can't
14 just -- at least I don't -- I can't just walk in and
15 say, you know, they infringe and not give you any detail
16 as to the reasons and facts and study that I have done
17 that support that opinion.

18 Q. Okay. Well, let's talk about some of the
19 resources you used to support your opinion.

20 What are -- what are some of the things that
21 you looked at?

22 A. The patent, obviously, and this thing called
23 its file history. I was here for the information that
24 Judge Davis read to you at the beginning.

25 And he mentioned that it's also sometimes

1 called the prosecution history. That's the record of
2 documentation that went back and forth between the
3 attorneys who represented i4i as they were trying to get
4 their application approved and the Examiner at the
5 Patent Office. They had a primary Examiner, who was
6 handling their case. And over those four years, there
7 were some documents, and that's what I read.

8 And I also -- relative to understanding the
9 claims, I read the Court's claim construction, which I
10 think Judge Davis also cited to you. It's my
11 understanding it's at the very back of your jury
12 notebook.

13 Q. Did you apply the Court's claim construction
14 in reaching your opinions?

15 A. For every term that the Court construed or
16 interpreted or defined, maybe is a simpler word, I have
17 used that construction in forming my opinions of
18 infringement.

19 Q. Okay. What other resources did you use?

20 A. Well, I mentioned that I had copies already,
21 I didn't have to purchase them, of Word. I actually had
22 both standard Word, which is non-infringing, and Word
23 2003, what they call Pro. I had Office Pro 2003 on one
24 of my computers at my home office.

25 And then I also had already -- I've got two

1 copies of Word 2007 that I run on a desktop computer and
2 on a laptop.

3 And then I've also worked with a gentleman
4 who I believe -- I know is here and will testify, I
5 think, after myself, a gentleman named Dr. David Martin,
6 who is a computer scientist. And he spent hundreds of
7 hours studying the actual source code software of -- of
8 both Word 2003 and Word 2007, and he sort of bubbled his
9 findings up to me.

10 He was not involved in anything to do with
11 infringement. My responsibility is to -- sort of picked
12 up where his reached, based on his analysis of the
13 software. And whenever there was any question in my
14 mind, I can read that software. I'm capable and enjoy
15 doing it. We would sit down together and flip through
16 the printed pages of the software to come to some issue.
17 But he also has written -- and he's kind of an exception
18 to many of the computer people that I deal with. He can
19 write and he can spell, which is pretty impressive, I
20 think.

21 And he's also proved to be very good at
22 coming up with drawings that express relationships among
23 various things in the software, and I rely on some of
24 his drawings as part -- I did in my reports, and I rely
25 on it -- on a drawing or so here today.

1 Q. Okay. You mentioned software and source
2 code. What is source code?

3 A. Source code are the instructions to the
4 computer that are written by the human beings, the
5 programmers, okay? They are sort of like English.
6 Depending on what the language is, they may be more or
7 less English-like. But they are expressing things --
8 they express things that you ultimately want the
9 computer to do.

10 If you want to add to numbers and then divide
11 them by another number and save that result somewhere,
12 there are ways to express that. Add A to B, store it in
13 C, and then divide it by D and print it, okay?

14 What you do with the source code is run it
15 through another computer program called a Compiler, and
16 the Compiler produces -- I heard some questions asked by
17 Mr. White about object code. Well, after you compile
18 the source code, you get object code. And object code
19 is what the computer itself understands. It's also
20 called the executable.

21 And when you load an application on your
22 computer, like Microsoft Word, that disk that you have
23 that's in these boxes or packages, it actually has the
24 object code, the executable, and it gets loaded into the
25 computer piece by piece. And that's what the computer

1 understands.

2 But source is what people with the right set
3 of skills -- of ordinary skill can -- can look at and
4 understand what's going on when that code is compiled,
5 loaded, and executed.

6 Q. Could you have formed your opinions simply
7 based on the object code running on your computer?

8 A. Not for this patent. This patent -- you have
9 to look under the hood to understand what the data
10 structures are, how the document that's being worked
11 with has actually been broken apart and how the parts
12 relate to each other.

13 And I -- I certainly can't imagine a way that
14 having only an executable version, only the stuff that's
15 in this box, would allow me to know whether infringement
16 actually took place or not.

17 Q. Okay. What else did you look at?

18 A. Well, and you've seen, Ladies and Gentlemen,
19 a lot of them. You've seen e-mails; you've seen
20 documents.

21 I've read the depositions of several
22 Microsoft persons, principally Mr. Little and others.
23 I've seen a large number of internal and external
24 Microsoft documents, as well as i4i documents.

25 I've read reports by an expert working for

1 Microsoft, as well as -- I mentioned Dr. Martin's
2 report, and a sequence of -- a pretty large set of
3 e-mail messages. And I've also located and reviewed
4 some documents that are available from Microsoft on the
5 internet.

6 Q. Okay. Before we get into your opinions in
7 detail, can you give us an overall summary of your
8 conclusions?

9 A. I've actually kind of stated the top-level
10 opinion already. It is my opinion, based on the study
11 that I've done to date, that Microsoft infringes Claims
12 14, 18, and 20 of the '449 patent, and there are three
13 different ways in which I have found that infringement
14 to be present.

15 And I'll give you a thumbnail as to what
16 those are and then deal with them in more detail at the
17 end of my testimony.

18 Direct infringement, as I understand it --
19 and the Judge is going to give you the charge. He said
20 he's responsible for the law. I'll tell you, what I
21 used in forming my opinion is the understanding that if
22 an employee of Microsoft performs one of the methods in
23 Claims 14, 18, or 20, that's direct infringement by
24 Microsoft.

25 Induced infringement is if Microsoft does

1 something that causes someone else to infringe.

2 And contributory infringement is that -- it's
3 a little different. It's a situation where they sell a
4 product which, when used as Microsoft expects it to be
5 used, will produce infringement by that user.

6 And I will address those three, at least
7 insofar as my understanding of those legal terms, later
8 in my testimony.

9 Q. All right. Before we get into your opinions
10 in detail, by way of background, do you think it would
11 be helpful to talk about some of the technology that
12 relates to this case.

13 A. I hope so.

14 Q. All right. Let's --

15 A. Mr. Cawley gave me a pretty broad charge
16 there when he said that that was my job, is to try to
17 explain this stuff. I'll do my best.

18 Q. Well, what is the background to this
19 invention?

20 A. Well, if you look again -- and I think Judge
21 Davis pointed this section out to you, there's generally
22 a section in a written patent that's called the
23 background of the invention.

24 And what you do know of the background of the
25 invention is sort of set forth, here's what things

1 looked like when I had my ah-ha moment, okay?

2 And you've heard other people talk about the
3 fact that the old approach -- the old approach was to
4 have paper documents dating back to Gutenberg, I guess,
5 or back to when monks and monasteries would pen out a
6 document.

7 Most of the focus and the complexity of
8 producing really nice documents has been on what's
9 called formatting the document.

10 If you see a chapter in a -- in a nice book
11 sometimes, the first letter of the chapter is a great
12 big letter with some fancy gothic-looking -- you know,
13 maybe even color, or if you see a title sometimes of a
14 chapter, it will be a bigger font, a bigger print, and
15 be bold so it looks darker on the page.

16 You actually saw an example that Mr. Cawley
17 held up of what looked like old-style markup. If you
18 had like a handwritten document that someone had
19 composed, and you expected a typesetter to convert it
20 into a printable document, they would go in, and there
21 were standard techniques where they could circle a piece
22 of text, draw a line out to the side, and if they wrote
23 ITAL, that meant I want that to be in italics.

24 They could do things like that that would
25 say, I want to see more space here between these lines.

1 I want to put a paragraph here where you'll go over to
2 the next line and indent. And that's what the printers
3 looked for.

4 And the way printers used to do this -- and I
5 know I visited Williamsburg once when I was going to the
6 University of Virginia, and they actually had an old
7 Revolutionary War type press.

8 And I remember seeing the guys take a little
9 rack that they could then pick from a big array of
10 letters in little lead type, and they would slide them
11 in, and of course, they had to do it mirrored image, so
12 they had to learn how to do that, because when you print
13 it, it flips it.

14 And if it said italics, then they would reach
15 over here and get an italic one. And if it said bold,
16 they would reach in some other place and put those
17 letters in. That's the way it was done. And the
18 typesetters -- you can see here, the typesetter guys
19 focused on the formatting.

20 Then we --

21 Q. Did anything -- I'm sorry. Did anything
22 change when people started using computers?

23 A. Then came the computer revolution, and all of
24 a sudden, instead of everybody doing their letters and
25 things on Selectric typewriters, we all began to use

1 computers to do that. And we typed on a keyboard, and
2 we looked at something on the screen, and then we
3 printed the document on our printer.

4 And what the word processors, as they're
5 called in the computer business, do, or did, they gave
6 you the capability to type in the content, the actual
7 words that you want to put into the document.

8 But the ones that were successful also gave
9 you the ability to say, from this point on, I want you
10 to make this underlined. And that's what you'd see on
11 the screen, and that's what it would print as.

12 And the patent actually mentions in the
13 background section, two of them, TROFF is one that I've
14 worked with. My recollection is, it came from the
15 University of California at Berkeley. It was kind of
16 difficult to use. It used kind of odd combinations of
17 characters.

18 I personally don't think I've had any
19 experience with WordStar. The earliest word processor I
20 remember was a product called Electric Pencil, and I
21 remember having -- I mean, that must be 25 years ago or
22 more.

23 But the thing that was happening,
24 Mr. Campbell, is every one of the companies that made
25 one of these word processors was going their own way.

1 They had their own idea about how to represent the
2 markup and how to store the documents so that they could
3 be maybe sent to someone else.

4 Q. Okay. And did standards develop for that
5 then since everybody was going their own way?

6 A. That's correct. Now, people said, you know,
7 it would be nice if there was some common way that we
8 all understood for representing the formatting markup.
9 And Motorola -- and I knew I was going to say that; I
10 spent too many years there -- and Microsoft got out and
11 developed a technique, a standard, called the rich text
12 format standard.

13 And it -- they made that publicly known, and
14 it allowed people who were making documents, when they
15 did their markup, to do it in a way that other word
16 processors could understand.

17 And, for example, I have had a number of
18 circumstances where I have created a document in Word --
19 and years ago, all the law firms seemed to use another
20 word processor called Word Perfect.

21 And I couldn't send the original Word
22 document to an attorney who wanted to look at it in the
23 Word form, but if I converted it, as the Microsoft Word
24 at that time let me do, into the RTF format, then what
25 had happened at the company that made Word Perfect is

1 they could understand the RTF and convert it into their
2 internal form.

3 And that was helpful to people who wanted to
4 be able to exchange documents across multiple word
5 processors.

6 Q. Okay. Can you show the jury what you mean by
7 formatting?

8 A. Sure. This is an example out of one of the
9 reports that I wrote.

10 And suppose we have a five digit number,
11 23987. The number over on the left-hand side is just
12 printed in normal text, okay? Then I printed it in
13 italics, and then I printed it in bold, and then I
14 printed it in both bold and italics.

15 And then I used Word to make it bigger. I
16 think I went from 12-point type to 14-point. This, I
17 think, was smaller, with 10-point type.

18 And then I got -- I don't even remember what
19 the name of it was, some odd-looking font that kind of
20 has shadows and a little tick mark above the 8.

21 But this is what I mean, and I think this is
22 what everyone has meant when they talked about
23 formatting. What does it look like? Sometimes called
24 the presentation of the document.

25 Q. And I think Mr. Owens talked a lot about

1 this, but did people move beyond formatting?

2 A. Yes. And that's kind of where the invention
3 began to come in.

4 And the key to this was this development of
5 SGML, this standard generalized markup language. And it
6 uses these tags. And you've begun to see them.

7 Generally, the normal way to do it is to use
8 a greater than and a less than and put them around
9 what's called a tag name. And the term that's used in
10 the SGML standard is that this is descriptive markup in
11 that it describes the content. It says this is a
12 telephone number, or this is somebody's first name.

13 And as you can see, it's marked using those
14 two horizontal V symbols. And then you've also heard a
15 lot about XML, which is a subset of SGML and uses the
16 SGML tags, these horizontally, to identify this
17 descriptive markup.

18 Q. Okay. So what can someone do, then, with
19 SGML or XML?

20 A. Well, they can answer this question: If I
21 see the five digit number, 23987, down in the middle of
22 a document somewhere, what is it?

23 Well, they can go in and give you -- with a
24 tag, okay, they can actually say this is the beginning
25 and end of a five-digit piece of letters or numbers that

1 define the member ID. And that's what SGML and, hence,
2 XML descriptive markup look like.

3 Q. Okay. Did you find any Microsoft documents
4 that summarized the difference between formatting and
5 what you can do with XML?

6 A. I think I found several. And this is a press
7 release that Microsoft produced in November of 2002, and
8 it was at least sent out with the name of the gentleman
9 that you've heard of a couple of times, I think. His
10 name is Jean Paoli. And I hope I'm pronouncing that
11 right. And, apparently, of French decent.

12 And I think one of the things that was
13 pointed out is that he has represented Microsoft on some
14 of the standards committees associated -- I can't
15 remember if the exhibit was for XML or SGML.

16 But he is kind of a Microsoft XML guru. I
17 believe he's been with the company since the mid-'90s,
18 and he has been a gentleman within Microsoft, to the
19 best of my understanding, who is focused on XML within
20 Microsoft.

21 And he says here, Finding a way to describe
22 the actual meaning contained in the document has been a
23 central focus of the XML community for nearly 20 years
24 when the technology was SGML.

25 Traditionally, the way a document is created,

1 it doesn't include information about its actual content.
2 All that's captured is the content's styling, its size,
3 whether the words are bold or italicized, the font, and
4 so on.

5 For example, a resume doesn't know it's a
6 resume. It's just a collection of words that only has
7 meaning when a human being interprets it that way.

8 Those of us in the XML field have long
9 believed that if we could separate the actual content or
10 meaning from the presentation of a document, then users
11 would be able to tag parts of their documents --
12 document with labels that mean something to them.

13 So in a resume, for instance, a user could
14 tag the name, address, career goals, qualifications, and
15 so on. In this way, documents of any kind could become
16 a source of information as rich as a database.

17 MR. CAMPBELL: And for the record, that's
18 PX81.

19 Q. (By Mr. Campbell) Why is it important to be
20 able to tag documents in a way that Mr. Paoli is
21 describing here?

22 A. Well, it's because they're so dadgum many
23 documents out there, okay?

24 This was an interesting comment in a -- it's
25 kind of a -- it's entitled A New Way of Thinking: Why

1 XML is important, by Gerry McGovern -- or I guess it's
2 Gerry (pronouncing).

3 And he said -- this is his estimate -- and
4 this dates back to 2000, almost 10 years ago -- there
5 are presently two and a half billion documents on the
6 internet, growing about seven and a half million a day.
7 If we include intranets and extranets, which are not --
8 the internet is sort of this publicly available
9 resource. Intranets and extranets are privately
10 operated networks. He said, if we include them, the
11 number of documents rises to an incredible 550 billion.
12 And this tagging business can help people faced with
13 this plethora of documents go into those documents and
14 extract important data.

15 Q. Is that sometimes referred to as unlocking
16 the documents?

17 A. It is. It is.

18 Q. What does that mean to unlock the documents?

19 A. Well, I tried to think of a way to illustrate
20 this. Let's just imagine that in somebody's business,
21 like mine, for example, I've got file cabinets with
22 documents that are -- in a variety of ways have
23 information that sometimes I wish I knew where it was.
24 The trouble is, if I've just got the documents in some
25 sort of electronic form, they're locked. And as a

1 result --

2 THE WITNESS: Can you move -- if you can
3 go forward. There you go.

4 A. These locks represent the fact that it's just
5 the document. And if I have 23897 and that's a member
6 ID for somebody, say it's their membership number at
7 COSCO, I can't find that without going page by page and
8 looking for it.

9 I can search for 23897 and find that number,
10 but if I want to find all the member IDs that are
11 represented in all of these documents, I don't have a
12 way to do that.

13 And that's what SGML and XML have provided
14 for people who are faced with large numbers of
15 documents, like government agencies, like many companies
16 who keep manuals over a lengthy period of time. That's
17 what it does.

18 Q. (By Mr. Campbell) All right. You mentioned
19 government agencies. Do you have another example where
20 SGML or XML might be used to interpret the data in a
21 document?

22 A. I kind of made one up. It's got a little bit
23 of silliness in it, but this one basically says, suppose
24 we had an intelligence support -- or we got somebody
25 who's Agent Clark Kent of the Homeland Security group

1 who's working at the airport in Dallas, and he wants to
2 send a notice to Janet Napolitano at the headquarters of
3 Homeland Security that he thought he saw something that
4 she should know about.

5 It reads as follows. And this is what's
6 called the plain text. This is just what you would type
7 into a typical, ordinary word processor.

8 I spotted Lex Luthor in Terminal D. I saw
9 him dial this number. I believe he was talking to one
10 of his associates about future terrorist activity. We
11 consider the threat posed by him to be immediate and
12 severe, because he's an explosives expert, and I
13 recommend immediate and continuous surveillance and
14 adding Luthor to the red-level watch list.

15 Okay. Just -- here's what a typical
16 unmarked-up letter would look like.

17 Q. Okay. And so would a computer be able to
18 know what Terminal D of the DFW airport means?

19 A. No. They -- they -- it, in and of itself,
20 would not be able to assign any meaning to this
21 document, or maybe even more importantly, to a similar
22 location identified in a different way in another
23 document. It wouldn't know what this was.

24 Q. So how do we -- how do we unlock that
25 document?

1 A. We put all this stuff in it.

2 And the funny thing about it is, is I'm
3 telling everybody that this is unlocking the meaning,
4 and yet initially, when you look at the document, it
5 seems to cloud any ability for you, as a human being, to
6 do something. It kind of gets in the way.

7 But this is not a technique that's intended
8 for human beings. It's a markup that's intended for
9 computers.

10 But here you can see that I've -- I've made a
11 markup -- I'll try not to do that. I've made a markup
12 up at the top that says, this is the beginning of an
13 intelligence report, and since these markings under SGML
14 and XML come in pairs, you can see down here at the
15 bottom is the ending mark or tag for the intelligence
16 report.

17 And I've marked the agency and the date, and
18 my name as Clark Kent and et cetera. I've marked up all
19 the critical information that's in this document.

20 Q. Okay. And can we now tell what the terminal
21 D of the DFW airport is in this document?

22 A. We now know, if I'm a computer program that's
23 going to analyze this document, that it contains the
24 citing location, and in specific terms, that citing
25 location was terminal D of the DFW airport.

1 Q. And did you create an animation that kind of
2 shows what it means for the document on the left to be
3 locked?

4 A. Yes.

5 Q. Okay.

6 MR. CAMPBELL: If we could start that
7 animation.

8 (Video playing.)

9 Q. (By Mr. Campbell) So what do we see here, Dr.
10 Rhyne?

11 A. All right. This is a document, and let's
12 imagine that somebody at Janet Napolitano's office
13 receives this, along with a lot of other ones that have
14 come in for the week, and they want to produce an
15 executive summary for the leader of the Homeland
16 Security group, which has the key information, the date,
17 who, where, how bad was it, what should -- you know.
18 Certainly, a human being can read this thing from the
19 top to the bottom, and that's what I've illustrated
20 here.

21 THE WITNESS: If you would proceed with
22 the animation.

23 A. Okay. They can say, well, there's the date,
24 and they could move it over here to this executive
25 summary. Mr. Luthor. It was at the Terminal D. This

1 is a manual process again, and human beings can
2 understand it in a way that a computer would have
3 difficulty doing.

4 And eventually, I can move all of this
5 information into the first column of an executive
6 summary, but that's all I'm going to do. If I'm going
7 to do the next one, I've got to sit there and read it as
8 well.

9 Q. (By Mr. Campbell) Okay. So how do things
10 change if we unlock the document and use XML?

11 A. Well, I tag it, okay? And now I have the
12 ability, with a computer program, to search through and
13 find those tags at computer speed. But not just for
14 that one, I can, at computer speed, find similar
15 information, if it's present, in literally -- here we
16 use, say, a thousand documents.

17 And I've got -- the last one I just put an
18 ellipsis in the middle here -- says that at another
19 date, we saw another terrorist in wherever Gotham Square
20 Park would be. It was urgent and so forth. That's what
21 the tags allow to be done at computer speed.

22 Q. Now, let's talk about what Mr. Owens and
23 Mr. Vulpe invented.

24 We've talked about SGML and XML, and I think
25 Mr. Owens was asked this, but did Mr. Owens and Mr.

1 Vulpe invent SGML or XML?

2 A. Neither one.

3 Q. Okay. What -- what -- what did they invent?

4 A. Well, they set it forth and they talk about,
5 again, the problem, as existed, when they came up with
6 their idea.

7 They pointed out that current practice
8 suffers from inflexibility. Documents combining
9 structure -- and that's the term that's used in the
10 patent to mean the information's meaning.

11 And they say -- documents combining structure
12 and content are inflexible because they tie together
13 structure and content into a single unit which must be
14 modified together.

15 This invention addresses the idea -- ideas of
16 structure and content in a new light to provide more
17 flexible and efficient document storage and
18 manipulation. And this new light is -- is the -- is
19 their invention.

20 Q. Okay. How did -- how did Mr. Owens and
21 Mr. Vulpe solve that problem and bring in a new light?

22 A. Well, they said that what we're going to do
23 is form a map of -- and we've got a Court definition for
24 what a metacode is, and we'll come to that -- a map of
25 tags in a sense found in the document is produced and

1 provided and stored separately from the document.

2 The map indicates the locations -- location
3 and addresses of these metacodes in the document. This
4 is the idea -- it was there in the title -- that they're
5 going to separate the architecture of the document from
6 the content of the document.

7 Q. Okay. And do you have another little
8 animation to show what that means to separate the
9 metacodes and the content?

10 A. I hope so.

11 This is actually an example from the patent
12 itself. I found it interesting. It said The Secret
13 Life of Data, and then it has a sentence, Data is
14 Hostile.

15 And I asked Steve Owens, who was here the
16 very first day, I said, Did you make this up?

17 And he said, No. Kind of.

18 He had been reading a book called The Secret
19 Life of Plants, and it characterized plants as having
20 emotions and feelings. And you had to -- and I think my
21 wife thinks, if she talks to her plants, they'll be
22 greener.

23 And so he said, based on the fact that that
24 book title was there, he came up with The Secret Life of
25 Data.

1 And you can see that he has a chapter, he has
2 a title, and then he marks something as a para, P-A-R-A.
3 That probably meant paragraph, but I don't know exactly.
4 It would mean something to whoever decided to tag it
5 with P-A-R-A.

6 Q. Okay. And so how did -- how does it work,
7 separating the document and the map and metacodes and
8 the content?

9 A. Well, what would -- what his idea was, is to
10 pull those apart in terms of what's actually in the
11 memory of the computer. And on the right is something
12 that in terms of the patent claims --

13 Q. I'm sorry.

14 A. -- okay -- is called the mapped content.
15 It's -- the content is, basically, the document text,
16 but it's been processed so that it becomes the mapped
17 content. The patent talks about raw content, input
18 content, and mapped content.

19 And associated with it, then, is a metacode
20 map. And that's what he does, what the patent does on
21 the other side: They convert that -- that collection of
22 these little tag things into a list of, well, what are
23 the metacodes that are in there: Chapter, title, para,
24 okay?

25 And it lists them, giving their tag names,

1 and then it gives a mapping that says, this tag name
2 over here into the mapped content applies from here over
3 to here.

4 And together, these two pieces of
5 information, two sets of information, redefine the
6 document in a separate way that was the foundation of
7 their new idea.

8 Q. Do you have a little timeline to show what
9 i4i had done up to this point?

10 A. Yes. You can see that in 1994, they had
11 gotten to the point where they could describe their
12 patented -- their patentable, they hoped, idea well
13 enough to form their application.

14 They could make the drawings; they could
15 write the written part of the specification; and they
16 could draft up a set of claims.

17 They sent it to the Patent Office. It was
18 back and forth there. The patent itself was issued in
19 '98. And then this product that we've heard a little
20 bit about with this S4/TEXT product became the product
21 based on the patent, as I -- as I've been told, that it
22 came out in March of 1999.

23 Q. Well, let's talk about what Microsoft was
24 doing.

25 A. Okay.

1 Q. Was Microsoft focusing on SGML or XML during
2 the 1990s?

3 A. No.

4 Q. What was Microsoft doing during this time?

5 A. Well, as Microsoft's attorney mentioned in
6 the opening, they had been working on up to 12 -- to
7 date, they have worked on 12 versions of Word.

8 Here, the set of versions, I think there's
9 seven of them, as they existed from '92 when Word 5 came
10 out until -- up here is Word XP that came out in
11 conjunction with the new operating system, Microsoft
12 Windows XP.

13 And these -- this is the sequence of versions
14 of Word that Microsoft had produced during that time.

15 Q. And did any of them support SGML or XML?

16 A. No.

17 Q. Did Microsoft offer anything during this time
18 that would allow Word to support SGML?

19 A. They attempted to.

20 In 1994, they contracted, as I understand it,
21 with another software company and had them develop
22 something that was called SGML Author for Word 6.0, and
23 this was a program that ran in conjunction with Word 6.0
24 and offered some capabilities to people who wanted to
25 annotate their documents in some way with SGML.

1 Q. How did SGML Author for Word 6.0 work out for
2 Microsoft?

3 A. Not very well.

4 This is an e-mail from March of 2001 from a
5 gentleman named Steven Sinofsky, a Senior Vice President
6 with Microsoft, and he said that SGML Author for Word --
7 and here I quote -- turned Word into a highly structured
8 and painful to use editor. We sold a very small number
9 of copies of this but kept the community at bay.

10 Q. Do you know what Mr. Sinofsky means by kept
11 the community at bay?

12 A. I can tell you what I think he meant. I
13 think he meant that there were people out there who
14 liked SGML and were clamoring for it, and by giving them
15 this SGML Author for Word, if they came to us, we could
16 say, well, look, we've got SGML Author for Word, so
17 we're on top of that.

18 But, obviously, it was not very effective; it
19 was painful to use; and it was not accepted in the
20 community that was trying to get that capability.

21 MR. CAMPBELL: For the record, this is
22 PX270.

23 Q. (By Mr. Campbell) So in 2000, where did that
24 put Microsoft in terms of providing SGML or XML support
25 for its customers?

1 A. Well, not in a very good place. And this is
2 an article with the title of Plea for an XML Client that
3 was written by this Mr. Paoli.

4 He began it by saying, We're in deep trouble.
5 He said, We are not building a single client who can
6 consume XML in its generality.

7 And by client here, this meant a product. We
8 don't have anything we can sell to people that has the
9 software capability of consuming, of reading and
10 processing XML in its general state.

11 He said, Please don't -- Please do not be
12 fooled by what we, at Microsoft, are building today.
13 And this is in 2000. Please don't be fooled by what we,
14 at Microsoft, are building today.

15 There is absolutely no client in Microsoft
16 which can consume, manipulate, modify, author, present
17 the data in a user friendly way to the user, and let her
18 take advantage of generic XML schema.

19 Q. I think we heard Mr. Thomas talk a little bit
20 about it, but what is an XML schema?

21 A. An XML schema is a way to link to a document
22 an allowed set of XML tag names.

23 If you're doing an invoice, it's probably the
24 name of the company that's supposed to pay you and their
25 address.

1 And so you would have tag names that are
2 available to you, as a document author, that would --
3 would give you a -- a repertoire, if you will, a menu of
4 tag names that you can use in this document.

5 And you actually, using the schema, can
6 assign characteristics to them. For example, you can
7 say, if it's a phone number, it's supposed to be numbers
8 and not letters. And if it's a date, then it's supposed
9 to look like this.

10 MR. CAMPBELL: And this is PX195.

11 Q. (By Mr. Campbell) Did other folks at
12 Microsoft express similar concerns to Mr. Paoli?

13 A. Well, Mr. Gates did. In an e-mail, and
14 again, in this early 2001 timeframe, he said, Now, the
15 market wants a great XML editor. That was certainly the
16 state of the market at that time.

17 He then continued, It's hard to say we are
18 the leader of the XML revolution if we don't have an
19 editor.

20 Q. Did i4i offer an XML editor at this time?

21 A. Yes. They had had one since 1999, a tool
22 that worked with Microsoft Word to accomplish that task.

23 MR. CAMPBELL: That's PX270.

24 Q. (By Mr. Campbell) So did developing an XML
25 editor become important to Microsoft?

1 A. Yes, it did.

2 This -- I've read the background of this
3 e-mail, Mr. Campbell, and this is by a woman named
4 Kim -- I believe it's a woman. I may be wrong. That's
5 the kind of name you can't be sure. Kim Field. She, at
6 this time, was in charge of Microsoft Press.

7 And Microsoft publishes lots of books. They
8 publish a very popular computer dictionary and another
9 set of things.

10 And she had had dinner with Mr. Gates as -- I
11 think with a group of people at a conference, and he had
12 listened to her, they had discussed some things that he
13 wanted to see the company doing. And he had told her,
14 kind of as we saw in that e-mail, that it was one of his
15 goals to position Microsoft as a leader in the XML
16 community.

17 And in this e-mail back to Mr. Gates, she
18 says, With respect to your goal to position Microsoft as
19 an XML leader, if we're betting the farm on the XML
20 revolution, an XML editor should be an absolutely
21 fundamental component of our product arsenal. And then
22 she said should be as of April the 2nd of 2001.

23 MR. CAMPBELL: And that's PX45.

24 Q. (By Mr. Campbell) So can you add what
25 Microsoft was doing to our timeline?

1 A. Yes. I already had shown you that in 1994,
2 they had done SGML Author for Word, and soon thereafter,
3 it was abandoned because it was painful to use.

4 Then we have Mr. Paoli's document that said
5 they were in deep trouble because they didn't have an
6 XML editor, and Mr. Gates and others had expressed their
7 concern about that hole in the Microsoft product suite.

8 Q. Before we get to Word 2003, can you describe
9 what options were available for just creating documents
10 in general at the time the inventors filed their patent
11 application?

12 A. Yes. There, basically, were two paths that
13 you could go down.

14 You could have a word processor, okay, like
15 Word, like Word Perfect, and those were designed to
16 allow you to type in characters and to format them so
17 that they would have an interesting and useful
18 presentation or appearance.

19 There were people working on XML editors. I
20 think there was some mention of a couple of them
21 earlier. One that I actually did some research on was
22 called XMetal. And they each had characteristics that
23 were useful in their domain, but they didn't help you in
24 the other domain.

25 Q. So what was the problem with the word

1 processor?

2 A. Well, it was designed for character entry and
3 formatting, and it was really good at it. Like I say,
4 I've used Word for years. It's very good in terms of
5 being able to produce documents that look slick.

6 And unfortunately, at least up until Word
7 2003, Word was not designed for supporting people who
8 wanted to tag their document with XML tags so that you
9 could know what the data in your document meant.

10 Q. And what was the problem with an XML editor?

11 A. It was designed around the XML standard. It
12 was designed to let you enter content and enter tags and
13 say I want this tag to apply from here to here, but it
14 lacked the -- the document presentation flexibility that
15 you got with the Word processors that were available at
16 that time.

17 Q. Now, did Microsoft and Microsoft's customers
18 recommend -- recognize the disadvantage of these two
19 options before Word 2003?

20 A. They surely did.

21 Here's a presentation. It's one page from a
22 PowerPoint -- at least it appears to be a PowerPoint --
23 one page from a slide presentation, and it was authored
24 by two gentlemen, Brian Jones and Martin Sawicki, in
25 2002.

1 It's entitled -- I think the presentation is
2 titled XML in Word 11. And I probably should say
3 something about that name.

4 Q. Go ahead. What is Word 11?

5 A. Word 11 was the internal name, as I
6 understand it, that was used at Microsoft for what is a
7 product that's called Word 2003.

8 And just to finish the path, the Word 2007 is
9 also called Word 12, and it's part of what's in each
10 Office 11 for 2003 and Office 12 for 2007.

11 Q. And how did they recognize the problems of
12 the two options -- how is Microsoft recognizing the
13 problem with the two options you talked about just a
14 minute ago?

15 A. Well, in this presentation, Mr. Jones says
16 that the key customer challenges that we have are
17 growing demand for XML authoring, and he commented, as I
18 did earlier, that information is locked inside of a
19 binary file.

20 Q. What does that mean, binary file?

21 A. The binary file is the proprietary format
22 that Microsoft Word uses for itself, and it's not the
23 kind of format that allows other programs to search
24 through and find, for example, tags and things like
25 that.

1 It -- it made it difficult for someone
2 writing software, other than Microsoft, to understand
3 what kind of information was in that file.

4 Q. And so what does this slide say about XML
5 editors?

6 A. He said there's no good user-friendly
7 third-party XML editor. He mentions XMetal,
8 Arbortext -- that's two of them. Then he pointed out an
9 interesting thing: That Microsoft's own content groups
10 using XMetal wishing for XML and Word and other
11 Microsoft applications.

12 Q. Okay. So what did Microsoft do then with
13 Word 2003?

14 A. Well, for the first time, they offered a
15 version of Word that supported XML. And there really
16 are two flavors here.

17 There's an internal flavor that Microsoft
18 developed that uses XML terminology with brackets and
19 things to support the older kind of formatting concepts
20 that they had already dealt with when they came up with
21 RTF.

22 And then they also, for the first time,
23 provided the capability for their customers who were
24 using Word to generate their own schema, their own set
25 of tags that they would like to use, things that

1 Microsoft didn't control, didn't know about, didn't
2 understand.

3 And Microsoft referred to that additional XML
4 as Custom XML, because it was unique to their individual
5 customers.

6 Q. Have you noted any other names that Microsoft
7 uses for Custom XML besides Custom XML?

8 A. I think I've also seen it in some e-mails
9 referred to as Arbitrary XML.

10 MR. CAMPBELL: I'm going to back up for
11 just a second and note for the record that the slide we
12 were talking about is PX395.

13 Q. (By Mr. Campbell) Okay. Did Microsoft
14 initially, when they started down this path to turn Word
15 into an XML editor, know how to do it?

16 A. Well, they didn't think they did. Here's a
17 slide from Stephen Sinofsky, the gentlemen we saw
18 earlier, making a comment about SGML Author for Word,
19 and in March of 2001, when they were beginning their
20 effort to produce an XML version of Word, he said, I
21 don't think we have any ideas on how to do this for Word
22 and that -- you can see the subject is a serious XML
23 editor.

24 Q. Okay.

25 MR. CAMPBELL: That's PX270.

1 Q. (By Mr. Campbell) Did Microsoft think that it
2 was going to be hard to turn Word into an XML editor
3 when they started doing this in -- started developing
4 Word 2003?

5 A. Yes. Here's a document that's actually kind
6 of at the end of the trail. It's written by Martin
7 Sawicki in October of 2002. And at this point, they,
8 basically, have gotten a working version of Word 11 or
9 Word 2003.

10 But looking backward, he said, when we were
11 starting planning for Word, we thought, if we can get as
12 far as just saving a Word document as XML, that would
13 already be a major accomplishment, since building
14 support for arbitrary schemas from scratch is extremely
15 different.

16 Q. What does that mean, Dr. Rhyne, saving a Word
17 document as XML?

18 A. Well, I mentioned that they had a proprietary
19 binary format in Word already. They had the RTF format
20 already. But neither of them represented the
21 information just in the document, including the words
22 and the formatting or presentation in a form that was in
23 compliance with the SGML or XML standard.

24 It didn't come out with the brackets and the
25 tag names and all of that kind of information to tell

1 you, for example, where to start bold or where to start
2 and stop italics.

3 And what Mr. Sawicki is saying, we thought if
4 we could just do that, if we could make the formatting
5 aspect of our document be something that we could store
6 away in an XML-compliant form, that would be good for
7 everybody. They could then write their own programs.
8 And while -- whereas they can't read the binary form,
9 they could read this XML form.

10 Q. So what is he talking about when he mentions
11 arbitrary schemas?

12 A. He's talking about that ability for a
13 customer to come in and add additional XML-compliant
14 tags, if you will, that the customer understood, but
15 Microsoft didn't understand.

16 They knew how to -- their goal was to figure
17 out how to be able to save XML tags that Microsoft
18 defined. That was their target. In fact, they called
19 that Word ML. They've got it -- they've got a set of
20 that XML.

21 But he's saying, if we open the door to
22 customers to come in and define their own XML tags,
23 that's going to be very difficult.

24 Q. So looking backwards, how does he sum up?

25 A. He says -- here it is in October of 2002. He

1 said just the fact that we can insert arbitrary XML tags
2 into Word docs -- documents and validate them today is
3 way beyond what we were dreaming of is feasible in Word
4 11 when we were starting -- getting started back in
5 March of 2001.

6 Q. All right. And, Dr. Rhyne, I think you've
7 been in the courtroom today. Can you remind us when
8 Microsoft and i4i first met in Washington, D.C.?

9 A. It was April the 18th and 19th of 2001, I
10 believe.

11 MR. CAMPBELL: And for the record, this
12 is PX44.

13 Q. (By Mr. Campbell) So did it become important
14 for Microsoft to solve this problem of using Arbitrary
15 or Custom XML in Word 11?

16 A. Well, that's what the community wanted. And
17 this is a press release that was formatted in kind of
18 like a question and answer with Mr. Paoli.

19 And so this press pass was as if it were
20 someone who is asking this question: Why is Microsoft
21 so extensively supporting XML in Office?

22 And Mr. Paoli said, With Office 11, we are
23 addressing a fundamental concern that we have heard over
24 and over again from our customers. Too often,
25 business-critical information ends up locked inside data

1 storage systems or individual documents forcing
2 companies to adopt inefficient and duplicative business
3 processes.

4 And that's like having somebody manually read
5 all those home security reports as an example of
6 something that would be duplicative.

7 MR. CAMPBELL: That's PX81.

8 Q. (By Mr. Campbell) So was adding Custom XML
9 support a big change for Microsoft?

10 A. Yes, it was.

11 Mr. Paoli, again, in writing about Office
12 2003, also known as -- within that is where we get Word
13 2003 or Word 11. He's describing the new document
14 model, and he says, Our customers' schema at the center
15 is a fundamental shift. Data, not presentation.

16 And then he goes on to say, This is a
17 break-through for the masses, a new way of thinking
18 about documents with Office 2003. It's a new document
19 metaphor, bridging the gap between documents and data.

20 MR. CAMPBELL: And that's PX80.

21 Q. (By Mr. Campbell) So how did Microsoft add
22 Custom XML support to the existing Word program? And I
23 know we'll talk about this in detail, but just in
24 general, how did they do it?

25 A. Well, it turns out, having, between myself

1 and David Martin, studied the way that they actually
2 implemented this goal of having Custom XML available
3 first in Word 2003 Pro and later and now in Word 2007,
4 they took the letter -- and here's another example that
5 Dr. David Martin made up.

6 This was sort of like a form letter that a
7 library would send to one of the friends of the library
8 members, maybe to tactfully remind him that he had a
9 book overdue or something.

10 And this letter has XML in it. It identifies
11 the member ID, the date, the salutation, the content,
12 and it says, Please replace this. So you would go in
13 and type whatever you wanted the message to be.

14 And then you have a postscript that says,
15 Don't forget to attend our library sale, and you end up
16 with the body in the overall letter.

17 And so what the Microsoft system does, with
18 its operational data structures, is to separate that
19 content from the tags, the marking up of the document.

20 And so the way it works, on the right-hand
21 side, they make mapped content. They go in and produce
22 a set -- a memory data structure that has the content of
23 the document in a form that has mapped it out.

24 And associated with it, they have a metacode
25 map to use terminology from the patent claims. And that

1 map lists the metacodes, the -- also known as the XML
2 tag names. It maps the metacodes back to the content on
3 the other side.

4 So there's a link to tell you where the
5 metacodes apply, and as a result, it defines the
6 structure of the document.

7 Q. Well, we should probably get into that in a
8 little more detail. Do you have a diagram that --

9 THE COURT: Counsel, let's go ahead and
10 take our afternoon break at this time, I think. Is this
11 a good stopping place?

12 MR. CAMPBELL: Yes, Your Honor.

13 THE COURT: All right. We've been going
14 for almost two hours now. We'll take our afternoon
15 break, Ladies and Gentlemen of the Jury. We'll be in
16 recess until 3:30. Please remember my instructions, and
17 we're in recess.

18 COURT SECURITY OFFICER: All rise.

19 (Jury out.)

20 (Recess.)

21 THE COURT: Please be seated.

22 All right. Very well. You may continue.

23 MR. CAMPBELL: Thank you, Your Honor.

24 Q. (By Mr. Campbell) Okay. Dr. Rhyne, before
25 the break, we talked generally about how Word supports

1 custom XML.

2 Do you have a diagram that illustrates how
3 Word supports custom XML in computer memory?

4 A. I think you have a slide of it here.

5 This is a portion of the diagram that was
6 originally produced, based on Dr. Martin's analysis of
7 the source code. I think in this particular case, it's
8 Word 2007.

9 Q. And do you have the same -- the complete
10 diagram there next to you on poster board?

11 A. I do.

12 Q. Would it be helpful to explain to the jury
13 what this depicts?

14 A. I hope so.

15 MR. CAMPBELL: All right. Your Honor,
16 would it be alright if Dr. Rhyne left the witness chair
17 and explained from the poster board?

18 THE COURT: Yes.

19 MR. CAMPBELL: We've blown this up to
20 3-X-4, but it's still a little hard to see.

21 Your Honor, could we move this closer to the
22 jury out in front of the witness box?

23 THE COURT: Yes, you can.

24 MR. CAMPBELL: Okay. Thank you.

25 Q. (By Mr. Campbell) Okay. Dr. Rhyne,

1 generally, what does this diagram show?

2 A. It shows a sequence of linkages that organize
3 the data -- it shows -- is that on?

4 It shows the linkages that organize the data
5 that's produced in memory by Word 2007 when it's
6 processed a document that had originally a mixture of
7 content and XML tags.

8 And related to what we had on the previous
9 slide, it shows the two separate parts, the mapped
10 content and the map of metacode and how the data
11 structures that collectively define those aspects of the
12 operation of Word 2007 open.

13 Q. Okay. Well, let's start with what we started
14 with with our animation, the mapped content.

15 Do you see the mapped content in this
16 diagram?

17 A. I do. And we created -- your graphics guys
18 created some clever little magnetic thingies that mark
19 this off.

20 And the key term in Microsoft's software
21 terminology, they call this collection of letters and
22 symbols and numbers a CP stream, which, as I understand
23 it, stands for character position stream. And this is
24 where the content goes after a document has been loaded
25 in and open, as it's commonly said, by Microsoft Word

1 2007.

2 And this is what Dr. Martin found when he did
3 that little example document with the library form. And
4 you can see that I've marked it, and I'll use it as a
5 specific example.

6 Here's where the member ID is; then if you
7 can read this, August 19, 2008, this is where the mapped
8 content holds the date.

9 Here was the gentleman's name, Mr. Burnett;
10 please replace this, was the body; don't forget, et
11 cetera.

12 And you can see looking at this that none of
13 the tags are there. That's why the separation has taken
14 place, but you have your content along with some control
15 characters.

16 Q. So is this CP stream the mapped content?

17 A. Yes.

18 Q. Okay. Where is the metacode map?

19 A. Well, at the top level, it's shown in a data
20 structure that -- oh, excuse me.

21 At the top level, it's shown in this data
22 structure here, which I'll note this was placed here by
23 Dr. Martin. He said that he has merged together some
24 structures for display purposes. But, basically, it has
25 a column that has what are called the character position

1 first, CP first numbers.

2 It has the second column that has the
3 character position limit, which is the ending --
4 actually, it's one space higher than the ending. This
5 tells you where something starts, and one count higher
6 than where it ends.

7 And this is the map of metacodes, although
8 the data structure itself is formed by linking in other
9 hierarchical data structures.

10 And if it's okay, I'd like to just kind of
11 trace this all around using the member ID as an example.

12 Q. Okay. Please do that, yes.

13 A. Okay. Now, this -- this green box right here
14 (indicates), Dr. Martin used what some people call
15 blowout or magnifying glass. It's a little hard to see,
16 and I think when I put this on -- on top of this figure
17 in my report, I actually kind of covered it up. But I
18 have moved it over a little bit so you can see what he
19 meant by this.

20 He says an expanded view of structure in the
21 field. Each one of these rows you can think of as if it
22 were a field. And there's several pieces of
23 information, one of which is this unlabeled box that
24 serves as what in computer science is called a pointer.
25 And that's like an address.

1 If you said, you know, my house is at 8407
2 Horse Mountain Cove, I've given you a specific place to
3 go.

4 And that pointer points to another unlabeled
5 location, which is in the second data structure. This
6 first data structure -- and Dr. Martin can actually come
7 in and read these things in a way that I have not
8 mastered yet.

9 This is an SDTIX name. This is an instance
10 of that structure. And a structured data tag
11 something -- I can't remember what the IX stands for.
12 And it then points to another instance of structure
13 called an SDTI. And one of the fields in that is called
14 the tag index qualified. It points to something that at
15 least Dr. Martin and I call a TIQ.

16 These are all the names that have been
17 assigned to these different variables within -- by the
18 programmers at Microsoft.

19 And that location actually, when you blow it
20 up, has two pieces, one of which is an identifier of a
21 particular place down here, a schema, that I will point
22 to. And the other, which is an element index, a TIQ.
23 And you can see in this case -- and I'm dealing with
24 what's down here in the mapped content in yellow. This
25 is the member ID.

1 And let me just work across it, and then I
2 will finish up the rest of the green.

3 This numerical value says go to the second
4 character position in the mapped content stream.

5 Computer people start with zero. They always
6 count from zero.

7 And here are a couple of control characters.
8 There's an anchor character and what appears to be a
9 paragraph character and another anchor character, these
10 little Vs. So if I start 0, 1, and 2, that denotes the
11 anchor character that's immediately ahead of the actual
12 content of the member ID.

13 And then the 9 -- if you count 0, 1, 2, 3, 4,
14 5, 6, 7, 8, 9, that puts you here (indicates), which is
15 the position just past the end of the marked member ID.
16 So these two members are going to tell you where it is.
17 This pathway is going to tell you what it is. And the
18 way you read this is you say, out of all the possible
19 schemas, it turns out a document that may have more than
20 one schema.

21 If you follow this dotted line down here,
22 that 0 means I'm talking about Schema No. 0. So if
23 you've got a Schema No. 1, 2, and 3 -- if you have
24 one -- those are not the ones I'm pointing to.

25 I'm pointing to this schema, which then has a

1 pointer that points to an instance of the XSDR
2 structure, which points to a particular location that's
3 called example.com, et cetera, for the letter, which is
4 where further information is stored.

5 And here is the elements location in that
6 instance, and it then points to this list. And this
7 list, which is created by Microsoft Word 2007, has all
8 of the metacodes, tag names, including member ID.

9 And the way they identify the fact that this
10 thing that goes from 2 to just ahead of 9 as being
11 member ID is they say, go find the 0 schedule -- schema,
12 work your way over to it, and look for the fourth
13 element.

14 So, again, counting from 0: 0, 1, 2, 3, 4.
15 When you trace out the larger data structure formed by
16 this pathway with all of these individual data
17 structures, you find out that in this map of metacodes,
18 from 2 to 1 less than 9, you've marked them as being a
19 member ID.

20 And if there were another instance of a
21 member ID in there, there would be another row with
22 wherever that one was. But if you trace this out, you
23 can work your way through, and you can find that there
24 are instances of all of the different metacodes, to use
25 that term, that are in the document, when it was

1 originally read in that, had been placed in that map.

2 Q. You seem to trace through all of the green
3 boxes there.

4 Is there a significance to the boxes being
5 green?

6 A. It is the way Dr. Martin represented the
7 pathway. In his report, he picked this one example,
8 tracing his way through from the beginning to the end of
9 the member ID.

10 And it's that pathway that says between 2 and
11 1 less than 9, that's the member ID as opposed to being
12 letter body or date or salutation. Those have their own
13 numerical links.

14 Q. So for the record, what is the map of
15 metacodes made up of?

16 A. It's made up of the information in the CP
17 first column, in the CP limit column, and the
18 information collectively that's shown through this
19 pathway that traces around with a great deal of
20 generality. They basically left themselves
21 opportunities, for example, to have multiple schemas.
22 But when you work through this with the specific values
23 that have been stored in each one of these locations, it
24 unambiguously identifies in the mapped content the fact
25 that between these two numerical positions, that's a

1 membership ID.

2 Second, that information is not here; it's in
3 this data structure.

4 Q. The member ID is the tag name?

5 A. It's the tag name, also a metacode.

6 Q. You talked about the list of possible tag
7 names there.

8 Is that -- is that -- is there a need for
9 something in terms of the patent for that area down
10 there on the bottom right?

11 A. Right. We'll see this terminology in one of
12 the claims, maybe in a couple. But there's a term
13 called a mapped -- excuse me -- a menu of metacodes.
14 And I'll show later on, when I'm dealing with my opinion
15 of infringement, that this information can be -- it is
16 presented to the user of Word 2007 as a menu.

17 This is where that information comes from.
18 This is the source right here of where that menu of
19 metacodes comes from. It's Schema No. 0, pointed to by
20 this. And here are all the metacodes that have been
21 used.

22 And this in particular -- if this had been
23 a 5, it would have been pointing to a postscript, or a 3
24 would be pointing to a letter.

25 Q. Let me deal with a couple of things. You

1 were here for opening statements, were you not?

2 A. Yes.

3 Q. Did you hear Microsoft's attorney suggest
4 that you attempted to obscure something with the red box
5 for the map of metacodes?

6 A. That may be a strong way of saying it. He
7 certainly had something to say.

8 In his figure, he cut out this piece right
9 here (indicates). And, again, I think the way I drew it
10 in my report, this red was setting on top of the
11 magnifying glass, and perhaps that's what he meant.
12 But this is what's in my report, and it originated in a
13 similar report filed by Dr. Martin.

14 Q. Did Dr. Martin's report have the red box
15 showing the map of metacodes?

16 A. No. As I said earlier, Dr. Martin had
17 nothing to do with comparing what he found when he
18 analyzed the software to the actual claim language.

19 And terms like map of metacodes, menu of
20 metacodes, and mapped content, those are terms from the
21 claims. That was -- my responsibility is to work with
22 him to develop an understanding of how the software
23 actually built this structure and then to relate that
24 structure to the claims.

25 If I hadn't found a match, I wouldn't be here

1 asserting infringement, but I believe that I have.

2 Q. So Dr. Martin's report has a version of this
3 figure without the red magnet boxes that you've put on
4 today?

5 A. That's correct. I took his figures and added
6 those boxes as indications of how I believe I had
7 found -- I have found the presence of the claim
8 structural requirements in the actual structures with
9 the Microsoft software.

10 Q. Let's move up a little bit. And can you tell
11 me to one of ordinary skill in the art what the boxes
12 that are leading into the metacodes -- what do those
13 mean? It's kind of an alphabet soup up there.

14 A. You talking about this guy here (indicates)?

15 Q. Yes, sir.

16 A. Again, I'm assigning my understanding of what
17 this acronym means. Somebody referred to this as
18 Hungarian notation; in other words, each letter has a
19 meaning.

20 And this is a bookmark data structure, an
21 instance of something that Microsoft has previously
22 created called a bookmark data structure.

23 But you can see there's something here called
24 HPLCBKF. Again, Dr. Martin probably can parse that out.
25 Some of it I know. I know that this H means that the

1 value of this stored here is a handle. That's a
2 computer science term.

3 And I realize I may be one of the few people
4 who will fully understand what a pointer is.

5 But a handle is a pointer to a pointer. So
6 it points you somewhere. And when you get there, it
7 says I'm going to point you somewhere else. It's double
8 and direct point.

9 And this F over here is for the first, and it
10 says, if you want to know where these first values are
11 stored for each one of the metacodes that we find of
12 relevance to the mapped content, you follow this path.

13 And Dr. Martin just illustrated it with a
14 dotted line, and I think he said this was some other
15 form of reference. He used solid lines, I think, for
16 true pointers. This is a handle.

17 Here's another handle, and it goes to F for
18 first. And so it's pointed down here to the second
19 column that -- this is another piece of the high-level
20 data structure that has the limit values.

21 And I think this is, I believe, the content
22 guide, and it begins at the beginning and it ends at the
23 end. So it has the largest span of values.

24 And then the third piece up here, which is
25 labeled in green, which, collectively, is a part of the

1 map of metacode data structure, is called the HSTTB,
2 which was the term that Dr. Martin found that I
3 identified in my analysis as being the way to reach the
4 map of metacodes from within this instance of the
5 bookmark data structure.

6 Q. To one of ordinary skill in the art, is there
7 anything missing in this diagram between the bookmark
8 data structure and the metacodes?

9 A. Well, I guess it depends on the level you
10 want to talk about, okay? There's actually -- I said it
11 was a handle. There's actually an unnamed pointer box
12 here, and the first guy points here, and the second guy
13 points there (indicates).

14 But I've used this drawing that Dr. Martin
15 made. It's kind of like if you look at a map of the
16 state of Texas and you see Tyler and it's got a little
17 yellow map -- you know, it's just got a little piece up
18 here. It doesn't show you every street and every
19 highway and the Loop and all that kind of stuff. It
20 just says here's Tyler.

21 This is at a fairly high level. If you need
22 to there are certainly -- in fact, I think Dr. Martin
23 did it. He had -- he looked at the lower-level detail.
24 But for the purpose of this explanation, he said this is
25 important structures in an example SDT bookmark.

1 And so I think it's appropriate in this case
2 not to have shown it, and you'll notice that he did use
3 the dotted line to say that it was another form of
4 reference besides being a pointer.

5 Q. Would one of ordinary skill in the art
6 appreciate that because that's a handle that there was
7 another box in there?

8 A. Yes. They would know that the handle is a
9 pointer to a pointer.

10 Q. And just before you sit down, Dr. Rhyne, once
11 Microsoft Word opened an XML document, a custom XML, and
12 populates these data structures, is this what the user
13 will see on the screen?

14 A. Yes.

15 Is it okay if I go back?

16 Q. I think that would be good.

17 MR. CAMPBELL: Your Honor, may I remove
18 the board to the side now?

19 THE COURT: Yes, you may.

20 A. Would you mind repeating your question?

21 Q. (By Mr. Campbell) Absolutely. No problem.
22 Once Word opens up the XML document and we see that what
23 you've gone through here on the board is what is in the
24 source code; is that right?

25 A. What you've gone through with the poster

1 board here is what you learned from the source code?

2 Well, when the source code is executed, this
3 is a way in which the document can be viewed. And over
4 here on this side, what I've got is the document with
5 the separated metacodes from the map combined back in at
6 the appropriate places, based on how they are pointed
7 into the mapped content.

8 And so you can see here's a letter up at the
9 top. There's the matching letter at the end. Here are
10 the two -- let's clear this out. Here are the two --
11 the two that define -- define member ID surrounding the
12 23987 and so forth.

13 Then over on the right-hand side in this view
14 is kind of the architecture of the document, to use a
15 term from the patent itself.

16 And then I told you that that list over here
17 (indicating) allowed the creation of a -- of a set
18 available metacodes, which you can -- if you wanted to
19 mark -- for some reason, if you wanted to go in and put
20 seasonal library, or in this case, artwork, and say I
21 want to mark that as a date, that wouldn't make a lot of
22 sense.

23 But you can mark it in the editing window to
24 the big left and then click on date and say I want this
25 to be a date. And the little purple things will show

1 up.

2 Q. Okay. So just contrasting what we've been
3 through here, on the easel is what you've learned from
4 the source code. And on the projector at this point is
5 what the user would see on the computer screen --

6 A. Right.

7 Q. -- is that right?

8 A. And I think it's fairly easy to tell that
9 simply looking at that picture on the screen, you don't
10 get any of this level of detail.

11 So if I have a copy of Word 2007 and I run it
12 and I look at this, I'm a long way away from being able
13 to form an opinion, pro or con, about infringement.

14 Q. Now, on the poster board, we went through
15 these structures in Word 2007. Is there any difference
16 in terms of your opinion in Word 2003?

17 A. I think I can do this sitting down. That
18 little -- maybe not. I'm sure I don't need a microphone
19 for just this one moment.

20 This particular bookmark data structure
21 that's right here (indicating) is actually not separated
22 out of this document object description, I think is what
23 the DOD is, although Mr. Martin -- Dr. Martin is
24 probably cringing back there. I might have that wrong.
25 But, basically, what they did before in 2003 is just had

1 this information sort of squeezed in here and not
2 separated out. In terms of anything -- and then,
3 really, that has nothing to do with my opinion of
4 infringement. It's just a difference in the
5 organization of the data.

6 Q. Well, let's turn to Claim 14, and as we go
7 through the claims, will there be -- will there be any
8 reason to make any distinction between Word 2003 and
9 Word 2007?

10 A. No.

11 Q. So can we just refer to Word collectively as
12 to 2003 and 2007?

13 A. Right. As long as you understand that for
14 2003, we're talking about two of at least the four
15 possible flavors. We're talking pro and standalone and
16 maybe Enterprise. But for 11, or 2007, we're talking
17 about them all.

18 Q. Okay. So where do we -- where do we start,
19 Dr. Rhyne, going through the first asserted claim,
20 Claim 14, of the '449 patent?

21 A. This is the first time that, Ladies and
22 Gentlemen, you really have been asked to look at a claim
23 in detail. So let me say a word or two about the
24 organization of claims in general and then deal with
25 this claim in particular.

1 You can see that they are paragraphs. And I
2 think Judge Davis pointed you the other day to where,
3 toward the end of the patent, it says we claim, and then
4 he mentioned the numbered paragraphs.

5 This first part of the patent of each claim
6 is called the preamble, okay? And what this preamble of
7 Claim 14 tells you is that this is a method for doing
8 something comprising. And so within that method are
9 four, what are called steps.

10 We're going to be providing something,
11 providing something else, compiling, and then applying
12 what's providing again.

13 And so I'm going to deal with each of these
14 individually and explain to the jury the reasons why,
15 based on my study in conjunction with Dr. Martin, I
16 believe that the Word products from Microsoft meet each
17 of these -- they're called limitations.

18 Q. Okay. What does the preamble for Claim 14
19 require?

20 A. It's a method for producing a first map of
21 metacodes and their addresses of use in association with
22 mapped content and stored in distinct map storage means,
23 the method comprising, and then there are the four
24 steps.

25 Q. Okay. Let's try to take that a little bit at

1 a time.

2 Did you find that Microsoft Word produces a
3 map of metacodes?

4 A. Yes. And in doing that, I used the Court's
5 construction.

6 Q. Okay. What is the Court's construction of a
7 map of metacodes?

8 A. He said it is a data structure that contains
9 a plurality. I'll stop there.

10 That's a term of the art, in writing patent
11 claims, that means two or more.

12 Q. Okay.

13 A. A plurality of metacodes and their addresses
14 of use corresponding to a mapped content. So it's a
15 data structure that has the metacodes. There needs to
16 be two or more.

17 And then it also has something called
18 addresses of use, which he has also defined.

19 Q. Did you find any Microsoft document that
20 indicated that Microsoft Word produces a map of
21 metacodes?

22 A. Well, they certainly -- I found documents
23 that refer to mapping. For example, here they call them
24 the schema elements, okay, which are the things in the
25 schema that you can assign. So that's the set of

1 metacodes that are available to you.

2 And here in a document called bringing XML to
3 the desktop, Microsoft said in Figure 2 above, the
4 schema elements and the task pane at right -- okay, so
5 we're talking about a figure that looks like this -- are
6 mapped to sections of the document.

7 And in this particular example, they had like
8 the doctor's name.

9 Q. Okay.

10 MR. CAMPBELL: That's PX57.

11 Q. (By Mr. Campbell) Did you find any other
12 Microsoft documents that indicate that a map of
13 metacodes was created?

14 A. I did.

15 Q. Okay. What do we see here on this slide?

16 A. Okay. Here it's a document produced by the
17 XML document editing task force. They're referring
18 again to this on-screen representation. And they say
19 the upper frame in the right screen shows all mapped
20 elements -- talking about this part right here
21 (indicating) -- contained in the document.

22 MR. CAMPBELL: PX41.

23 Q. (By Mr. Campbell) And do you have one more
24 Microsoft document that suggests that Microsoft produces
25 a map of metacodes?

1 A. I found one other instance of them referring
2 to the elements of the schema as being mapped. And in
3 this development solutions document, which is -- I'll
4 help you -- PX61 -- they said, by including support for
5 mapping custom -- customer-defined schemas into the
6 content of Word.

7 They're saying they're going to give you the
8 ability to map the metacodes that are in the schema into
9 the content. That's the linkage that this operation
10 that Word supports.

11 Q. You mentioned an address of use. What is an
12 address of use?

13 A. Well, the Court has given us a construction
14 for it. He says it means a unique identifier which
15 defines the position of a metacode relative to a mapped
16 content stream and the place in the content at which the
17 metacode is to exert its effect.

18 Q. Did you find that Microsoft Word uses an
19 address of use?

20 A. It's exactly what you -- I was going to try
21 to do it, except you've already put that orange box
22 around it.

23 Those CP first, read that as character
24 position first, and character position limit define the
25 position of a metacode relative to a mapped content.

1 And if you remember, I actually counted you
2 across right down in this area (indicating) and showed
3 you that there's an anchor character, that little V,
4 immediately ahead of this particular row, which was for
5 member ID.

6 And it counted over to No. 9, which is one
7 position further than the member ID. Then that's the
8 location of another anchor character right in the
9 ninth -- excuse me -- the eighth position.

10 And between those two, they define the place
11 in the mapped content, which is the CP stream down here,
12 at which that metacode is to exert its effect. It said
13 these five characters surrounded by the anchor
14 characters and counted off from 2 and 1 less than 9,
15 that's the member ID.

16 Q. Did you identify any other evidence that
17 Microsoft Word uses in the address of use?

18 A. I did. This was part of a deposition of
19 Mr. Little representing Microsoft. And he was asked
20 about the -- he said, okay, so I think you said the
21 BMDS -- that's that yellow and green guy up at the top
22 left -- holds the beginning bookmark PLC and the ending
23 bookmark PLC. That's the values.

24 Those are stored as CP, meaning character
25 position values, correct.

1 And he says -- I won't read you all the
2 letters, but that's -- he says both use CP values to
3 track positions. He's referring to, for example, the 2
4 and the 9.

5 Q. Doctor, what is a metacode?

6 A. Well, again, the Court has given us a
7 definition. He says it's an individual instruction
8 which controls the interpretation of the content of the
9 data. It tells you what the data -- what the content,
10 like those five numbers, how they should be interpreted.

11 Q. So in terms of those five numbers, what is
12 the metacode?

13 A. The metacode is member ID.

14 Q. So what is -- in general terms, is it the
15 custom XML tag name is a metacode?

16 A. Yes.

17 Q. Did you find any Microsoft documents
18 explaining that that is a metacode?

19 A. Yes. Here's a document entitled Microsoft
20 Office System and XML, subtitled the Value of XML on the
21 Desktop. And it reads: XML uses tags to define
22 specific elements within a document.

23 An element would be like 2, 3, 5, 7, 9, if I
24 read that right.

25 XML tags define the document's structural

1 elements and the meaning of those elements. In other
2 words, they tell you how to interpret the content.

3 Q. All right. Did you identify --

4 MR. CAMPBELL: For the record, that's
5 PX60.

6 Q. (By Mr. Campbell) Did you identify any other
7 Microsoft documents that support your opinion that a
8 custom XML tag name is a metacode?

9 A. Yes. Here's Microsoft Office System and XML
10 Bringing XML to the Desktop. And they wrote: The key
11 here is that while HTML -- that's an earlier format only
12 markup language; it's sort of going down a different
13 path from SGML and XML.

14 While that markup language tagging describes
15 how to render or display data, this XML tag describes
16 the data itself.

17 MR. CAMPBELL: That's PX57.

18 Q. (By Mr. Campbell) Do we have one more
19 Microsoft document that supports your opinion that an
20 XML tag is a metacode?

21 A. I believe so. This is another Microsoft
22 document entitled About XML Documents in Word.
23 And it says: For example, if the custom schema is for
24 resume data, the XML tags in the document will define
25 the structure of the document in terms of name, address,

1 work experience, education, and so on.

2 And what they're saying is that the schema,
3 which would be the set of available metacodes, would be
4 something that makes sense in the context of a resume.
5 And then within the actual resume, you would use those
6 metacodes to mark where the person's name was -- excuse
7 me -- where the address is, et cetera.

8 Q. Okay.

9 MR. CAMPBELL: That's PX390.

10 Q. (By Mr. Campbell) I think I misled you a
11 little bit, because I think you have one more document
12 that supports your opinion --

13 A. I thought I did.

14 Q. -- that Custom XML tag names are a metacode.

15 A. This is in a document entitled, The Office 11
16 Layperson Specification, and in a section entitled A
17 Quick Overview of the Basics...what is XML?

18 They say XML stands for extensible markup
19 language. It is basically a technique for creating
20 structured data; in other words, data that is organized
21 in a manner that clearly and unambiguously identifies
22 each individual piece of information.

23 Q. What does that mean, that XML is extensible?

24 A. Well, it means that if I want to define my
25 set of metacodes for my resume or if I'm doing invoices

1 or if I'm doing medical information for a hospital, I'm
2 free to come in and give you the set of metacodes the
3 way I want them to be. It's open to customer-supplied
4 or arbitrary metacodes, and, hence, as a result,
5 customer-supplied schema.

6 Q. Preamble also requires that the map of
7 metacodes be stored in a distinct map storage means?

8 A. Yes.

9 Q. Did you find that in Microsoft Word, the
10 mapped metacodes are stored in a distinct mapped storage
11 unit?

12 A. Yes.

13 Q. How is that done?

14 A. Well, you can see here that there's an area
15 in the memory of your computer, when you're running
16 Microsoft Word 2007, that is the mapped content. And it
17 is separate from the other data structure that I've
18 traced out following the green pathway identified
19 originally by Dr. Martin.

20 Those are separate or distinct memory
21 locations that hold the mapped content in the lower left
22 and the map of metacodes in the -- from the middle left
23 around to the lower right.

24 Q. So, Dr. Rhyne, did you find that the use of
25 Microsoft Word practices a preamble of Claim 14?

1 A. Yes.

2 Q. What is the next part of Claim 14?

3 A. It's the first step. And it says to perform
4 this method, you must -- providing the mapped content to
5 mapped content storage means.

6 Q. Okay. And did the Court define mapped
7 content and mapped content storage means?

8 A. Yes. They define the mapped content to mean
9 the content of a document corresponding to a metacode
10 map.

11 And they defined -- the Court defined mapped
12 content storage means, meaning a portion of the memory
13 for storing mapped content.

14 Q. And does Microsoft Word have mapped content
15 storage means?

16 A. Yes. It's -- you have labeled it as yellow
17 here. I used red on the magnetic stick-on.
18 That's the CP stream, and it is in a portion of memory
19 used for storing that mapped content.

20 Q. So the CP stream is the mapped content?

21 A. Yes.

22 Q. Did you identify any other evidence that
23 Microsoft Word provides mapped content?

24 A. Yes. Here again is some of Mr. Little's
25 testimony. He was asked: Okay. As Word reads in that

1 document -- meaning it reads it into the computer -- as
2 Word reads in that document, it places the content into
3 a content stream; is that correct?

4 Mr. Little's answer was yes. If you -- if
5 we're referring to the binary in-memory document as
6 the -- if we're referring to its character stream as the
7 content stream, which is what I've done -- yes, he said.
8 Okay. Is that referred to as the content stream within
9 Microsoft?

10 And he said: Typically, we'll refer to that
11 as the CP stream.

12 Q. So, Dr. Rhyne, did you find that Microsoft
13 Word provides the mapped content to the mapped content
14 storage means?

15 A. Yes. It moves it into that area of memory
16 that I've labeled as the mapped content and that
17 Microsoft refers to as the character position or CP
18 stream.

19 Q. What is the next step of Claim 14?

20 A. It says providing a menu of metacodes.

21 Q. What -- what is a -- first of all, Dr. Rhyne,
22 what is a menu?

23 A. I think you're familiar with menus. If you
24 go -- I've been to, I think, four Mexican restaurants in
25 the week that I've been here. My wife doesn't like

1 Mexican food, so I go when I'm on the road.

2 And each time they've given me their menu,
3 and it had a list of things that I could select. And
4 that's what a menu is. It's a common term.

5 Q. Okay. Now, did you find that the use of
6 Microsoft Word provides a menu of metacodes?

7 A. Yes. And let me be clear. This is the data
8 structure in memory primarily including this link that
9 goes from Schema No. 0 up to the instance of the XSDR
10 structure over to this list.

11 And I've marked it as the menu of metacodes,
12 but the actual menu is what that data -- those data are
13 used to present on the screen.

14 Q. Okay. And what -- what does that present on
15 the screen?

16 A. It's shown in the lower right-hand side of
17 this view from Microsoft Word 2007. And if we blow that
18 up, you can see that at this point in the document, you
19 have available to you this three-element menu.

20 Let me erase that.

21 Okay. Member ID, date, and letter body.

22 It's more of a mess...

23 And so that is the menu produced from the
24 original list that I showed over here.

25 Q. Did you identify any Microsoft documents that

1 support your opinion that there is a menu of metacodes
2 provided?

3 A. I found some. Here's a document entitled,
4 About XML Documents in Word. And to read it, it says:
5 When a custom XML schema is attached to a document --
6 let me stop for a moment.

7 That's what happens when I say this is a
8 resume, and I'm going to give you this list of possible
9 metacodes: Name, address, experience. That's what that
10 means.

11 When a custom XML schema is attached to a
12 document, the XML structure task pane provides a list of
13 elements that are defined in the schema. You apply XML
14 tags to the document by selecting document content and
15 then choosing an element from the list.

16 And they're referring to that three-part
17 picture that we saw as the screen shot.

18 Q. Okay.

19 MR. CAMPBELL: For the record, that's
20 PX390.

21 Q. (By Mr. Campbell) So, Dr. Rhyne, did you find
22 that Microsoft Word, using Microsoft Word, practices the
23 step of providing a menu of metacodes?

24 A. Yes, it does.

25 Q. What's the next step?

1 A. It says compiling a map of the metacodes in
2 the distinct storage means by performing three steps.
3 It says locating -- or I guess I should say substeps --
4 by locating, detecting, and addressing the metacodes.

5 Q. Did the Court construe what it means to
6 compile a map of metacodes?

7 A. Yes, it did. It basically laid it out as a
8 sequence of steps. It said that that compiling a map of
9 the metacodes in the distinct storage means by locating,
10 detecting, and addressing the metacodes means creating
11 and storing a map of metacodes in the distinct storage
12 means by finding the positions of the metacodes in and
13 relative to an input content stream; recognizing,
14 identifying, or differentiating the metacodes from
15 content; and forming unique identifiers which define the
16 positions of the metacodes relative to the mapped
17 content stream and the places in the content at which
18 the metacodes are to exert their effect.

19 Q. Okay. I realize this may be a little
20 tedious, but can you describe how the compiling process
21 works in Microsoft Word?

22 A. I can, based on the fact that David Martin
23 went through the software in great detail, and he and I
24 sat down and he walked me through this path. And I have
25 taken from his report. I've kind of reworded it into my

1 words, but I believe this is in exact compliance with
2 what he found in his original analysis.

3 Microsoft Word opens an XML document which is
4 the input content stream referred to over on the
5 left-hand side. We'll see I've got the input content
6 stream right there (indicating). And it processes it in
7 order, character by character, to find the content and
8 metacodes.

9 In so doing, it reads the input content
10 stream and looks for metacodes using the limiting
11 characters -- that's that horizontal V facing in both
12 directions -- as detection to identify and differentiate
13 metacodes from content.

14 Then it writes out the content and metacodes
15 to a temporary file, along with formatting information.
16 And that formatting information is information that
17 Microsoft Word puts in, using this thing I referred to
18 earlier as called Word ML. It's a way of -- that they
19 have decided it's appropriate to put paragraph marks and
20 things into the original document.

21 Okay. It then repeats Steps 1 and 2 for the
22 temporary file input content stream. And if the input
23 document is of a certain type, it will basically work
24 through that document and create this temporary file.
25 It then goes back, in a sense, and detects start tag and

1 places the information about the start tag and the
2 character position of the start tag within the content
3 stream on what, in a computer sense, is called a stack.
4 It just means kind of like you stack plates, and you put
5 them on, and then you take the top plate off.

6 And that basically is referring to -- if, for
7 example, in the case of the member ID, that would be
8 finding that the member ID start tag in the original
9 document was in a certain location and it's going to
10 precede these five digits: 23987.

11 It then copies and stores the content in the
12 CP stream. That's when it moves the 23987 down into
13 this CP stream, the mapped content.

14 Then it detects the end tag, which would be
15 the backside of the 23987 where it said bracket, slash,
16 member ID, another bracket, and it adds information to
17 the metacode map, including a reference to the tag name
18 and character positions of start and end tag.

19 It's basically saying that you put the 2, the
20 9, and the information which ultimately points to the
21 fact that this is a member ID range into the metacode
22 map, and then you repeat those Steps 4 through 7 for the
23 entire document.

24 Q. Okay. Dr. Rhyne, can you tell us what part
25 of this process satisfies the requirement of finding the

1 position of the metacodes in and relative to an input
2 content stream?

3 A. I marked it with some yellow. And finding
4 the positions of the metacodes in and relative to a
5 input content stream is associated with opening an XML
6 document, which its characters, including the metacodes,
7 are the input content stream, and process it in order to
8 find the content and the metacodes.

9 Q. And what part of the process corresponds to
10 the recognizing, identifying, or differentiating the
11 metacodes from the content?

12 A. Well, Step 2 does that. It reads the input
13 content stream and looks for these little symbols in
14 order to detect and identify and differentiate the
15 metacodes from the content.

16 It recognizes because these little brackety
17 things are there, that that says member ID. And then
18 there's the 23987 that is the member ID. It can
19 separate those.

20 Q. And what part of this process corresponds to
21 forming the address of use?

22 A. Well, it really works out to be two of these
23 steps where they detect the start tag, okay? And then
24 later on, they detect the end tag. And using that
25 information and the tag name, they place information in

1 that metacode map that says there's a member ID that
2 ranges from 2 to 9.

3 Q. When the user is opening their XML document,
4 could it be that the user starts at Step 4?

5 A. It depends on the nature of the XML
6 document -- of that original document.

7 If the document has already been processed
8 and is in an XML format, then it can start at Step 4.

9 If it's what's called raw content or just a
10 regular, ordinary character that doesn't have that
11 Microsoft-defined word, ML, in it, then you do Steps 1
12 through 3.

13 Q. Okay. If you start at Step 4, do you still
14 perform Steps 1 and 2 as you read them off for how
15 Word compiles a map?

16 A. I like the way David has explained it --
17 Dr. Martin has explained this to me on a number of
18 occasions.

19 They start in working their way through the
20 document, and if they find out that, hey, this is
21 already a bona fide XML document and they stop and they
22 jump down to Step 4 and then repeat the hunt for the
23 metacodes.

24 If they find out that it's just raw content,
25 it's not already been processed with Steps 1, 2, and 3,

1 they continue that process. They produce the temporary
2 file, and then they start over and search through it
3 again.

4 Q. Okay. Describing this process was a little
5 wordy. Did you -- did you provide -- did you create an
6 animation to try to show how this process works?

7 A. I did, and it's pretty complicated, okay?
8 But let's see. I hope this will help.

9 Q. Let's play the animation and see if you can
10 describe it.

11 A. Here's the document. We're going to -- I'm
12 going to show you what it does when we fill out the
13 metacode map and move the information in the original
14 documents, which has both metacodes and content into the
15 map content.

16 So we found letter. They put that on the
17 stack, and you'll see they're kind of built up. Then
18 they found -- there was the beginning of a member ID.

19 They put some control characters down in the
20 bottom to identify these little anchor kind of things.
21 And then they came in and said, well, let me move the
22 23987 into the mapped content and keep looking. And
23 then they found the end of the 23987, and it put these
24 two anchor characters, the left and right V's. And it
25 put on the metacode map -- and notice it says 1 to 8,

1 not to the 9.

2 So it hasn't really finished everything, but
3 it's got from 1 to 8 as a metacode. Then they find the
4 date, and they put August 19, 2008, down in the mapped
5 content, because that is the date.

6 When they find the ending part of the date,
7 then they can come in and resolve the date and say, from
8 9 to 26, there's a date, and there are the characters in
9 the mapped content.

10 Then they say we are working on a letter
11 body. We're inside of that, and now inside of the
12 letter body, I have a salutation: Dear Mr. Burnett. We
13 move those letters down into the mapped content.

14 When we find the end of the salutation, we
15 can put them in the metacode map from 28 to 47. It is a
16 salutation.

17 Now we've got the content -- and, remember,
18 it was just dummy content. It said please replace this.
19 So that goes into the mapped content down at the bottom.
20 When we find the end of the content over here, we're
21 going to -- now we can say it goes from 48 to 69, and
22 that's where the content is.

23 We now find the beginning metacode for the
24 postscript. We work all of that in. It's very lengthy.
25 So it's started at 70, and when we get all through,

1 we're going to find out that I hit the end of the
2 postscript, and I can now put another row in the map,
3 okay, from 70 to 204.

4 I now have an end for the letter body. And
5 that's why I said this was a stack over here, because
6 now I can pop it off. The stack is closed. And I can
7 then put the letter in at the appropriate place, and I
8 have to move it into the right spot so that the CP first
9 numbers stay in order.

10 And then I hit the end of the letter, the
11 metacode that says that's the end of the letter, and,
12 boom, now I have the map. That was the process that the
13 software actually goes through. That's pretty fast and
14 pretty complicated.

15 But this last step, which puts the letter,
16 the bracketing first and last markers, is the one that
17 pushed in a row at the top, and all of a sudden -- you
18 probably missed it. That 1 and 8 became a 2 and a 9,
19 and we added one up, because there was a character that
20 was -- I can do that better.

21 There was a character that was added to the
22 very front as the anchor character for the overall piece
23 of mapped content.

24 Q. Would there have been any formatting command
25 codes in this document?

1 A. Not at this point, no.

2 Q. At the point of just before it starts
3 creating the map in our compiling process, would there
4 have been formatting commands that were added to the
5 document?

6 A. Well, these little paragraph markers are
7 something that they've placed in here that carry
8 information, but the original document did not have any
9 format. They were inserted into the mapped content as
10 the appropriate -- they look like paragraph symbols.

11 Q. Part of this process in Step 3, you explain
12 this was a temporary file with format information?

13 A. Right. I have not shown the temporary
14 file. I just moved directly to the result of having
15 created the temporary file. So if it's there, it's
16 just not shown.

17 Q. So you didn't show the formatting code --
18 command codes in the animation?

19 A. No. Those are proprietary motor -- I'll do
20 it again -- proprietary Microsoft codes, and I just
21 omitted them from the animation.

22 Q. Microsoft Word will read those command codes
23 and process them as appropriate, correct?

24 A. Yeah. It won't put them in the metacode map.
25 It processes them in an entirely different way. And

1 they do not show up since the metacode map will have the
2 arbitrary schema of metacodes.

3 Q. So, Dr. Rhyne, did you find that when
4 Microsoft Word opens an XML document with Custom XML,
5 that it compiles a map of the metacodes in a distinct
6 storage means by locating, detecting, and addressing the
7 metacodes?

8 A. Yes.

9 Q. What's the next step of Claim 14?

10 A. It's providing the document as the content of
11 the document in the metacode map of the document, these
12 two pieces.

13 Q. And what did the Court say is the definition
14 of providing that document as the content of the
15 document in the metacode map of the document?

16 A. For this part of Claim 14, this gave an
17 alternate. It said it can mean providing the document
18 as a single composite document with the metacodes and
19 the content together or providing the document as two
20 separate discreet elements, specifically the content of
21 the document and a metacode map of the document.

22 Q. Did you find that Microsoft Word provides the
23 document?

24 A. Yes. I have shown here we've got that map of
25 metacodes. This is the separate approach where I've got

1 the mapped content in yellow and the map of metacodes in
2 memory in red.

3 Q. Okay. Does Microsoft provide other ways of
4 providing the document?

5 A. Yes. When I decide to save a Word -- a
6 document in Word, I have a variety of choices. And this
7 is the set of choices I had in Word 2003. There is a
8 form called the worddocument.doc. It's right here
9 (indicating).

10 Like if the name of it is, this is my
11 document, you put a period, and it will have a D-O-C at
12 the end of it to tell everybody who looks at the
13 document that it's of this particular type. There's a
14 related one that called a dot, D-O-T, template.

15 Those, when you save them in the file form,
16 they are a binary file format, and they keep the
17 metacode map and the content separate.

18 There also is a merge representation, which
19 was introduced in Word 2003, which is a dot XML, okay?
20 And that is a composite structure.

21 Then there are two others we talked about,
22 rich text format and web page, but, basically, the
23 first -- the Word document, the dot doc and the XML
24 format, dot XML, are each ways of doing it separately
25 and compositely.

1 Q. And that's for Word 2003?

2 A. Yes.

3 Q. How does that work for Word 2007?

4 A. They got a bigger set of stuff, okay? They
5 introduced a new style of document that can be saved
6 that's called a doc X. They added an X to it.
7 And then they have a macro-enabled version of that
8 that's doc M. They have a template that's dot, D-O-T,
9 X, a macro-enabled template, et cetera.

10 All of these up at the top are of the type
11 that keep them -- keep the metacode -- metacodes and the
12 content together into a composite representation.

13 They still have the Word document with the
14 doc X and the template and the others at the bottom,
15 where the Word document maintains it as a separate. If
16 it's a dot, D-O-C, or doc, in the binary file format,
17 they're still separate.

18 Q. So I notice there's six different XML files
19 formats listed here for Word 2007. Why did you
20 highlight the first one, the dot doc X?

21 A. It's what's called the default format. If
22 you don't specify something else, if you just open up
23 Word and start typing a document, then you just say save
24 it, I want to close it out, and I'll open it up tomorrow
25 and work on it some more, it will be saved as a dot doc

1 X, D-O-C X.

2 And if you go back one, I think I marked the
3 fact that in Word 2003, the separate representation in a
4 binary file format, the dot D-O-C was the default.

5 Q. So that's a lot of different file formats.
6 What file formats would you expect that people that use
7 Custom XML are going to use?

8 A. If you go to the trouble in working on your
9 document to attach a schema and mark all those
10 metacodes, I believe they will tend to use either -- I
11 think they will use that dot XML, or in the case of Word
12 2007, they'll use doc X, one of the forms that give you
13 the composite document representation that's not in a
14 proprietary binary file format from Microsoft.

15 Q. So people who use Custom XML will use an XML
16 file format?

17 A. I think that's the one -- that's certainly
18 the one that I've picked for the examples that I've
19 done, because it preserves all of the metacodes in the
20 appropriate places in one file that's easy to read when
21 you try to address that file with a different
22 application program.

23 Q. And so does your opinion regarding Claim 14
24 assume that people that are using Custom XML are using
25 an XML file format?

1 A. Yes.

2 Q. Does Microsoft provide any instruction to
3 users to use a particular file format with Custom XML?

4 A. If they have an XML document, their help
5 information tells you that -- you can see it here --
6 Note: XML features, except for saving documents as XML
7 with the Word XML schema -- that means except for
8 documents that use the proprietary Microsoft schema --
9 are available only in Microsoft Office Professional,
10 et cetera.

11 And the list of what to do to save those
12 kinds of documents. That would be documents that have
13 Custom or Arbitrary XML.

14 On the file menu, click save as. In the
15 save-as-type box, click XML document, which means it's
16 going to get a dot XML at the end of it. In the file
17 name box, type the document name.

18 If you've attached a custom schema to apply
19 XML tags and want to discard all the Word stuff, meaning
20 the Microsoft proprietary, you can even save it as a
21 saved data only, and then it will only have your stuff
22 in it.

23 Q. And for Word 2007, the default format is an
24 XML file format?

25 A. Yes.

1 Q. Why did Microsoft move to an XML format as
2 the default? What was the problem with the old binary
3 format?

4 A. Well, they actually explained that in this
5 document entitled Introducing the Office 2007: Open XML
6 file formats.

7 The writer said, Likewise, with the adoption
8 of support for XML in Microsoft Office 2000, developers
9 began to see the need to transition from the binary file
10 formats seen in previous versions of MS Office to the
11 XML format -- they identify it here. They say binary
12 files, dot D-O-C, dot D-O-T. These others are for
13 applications other than for Word. So for Word, it's dot
14 D-O-C and dot D-O-T -- which for years did a great job
15 of storing and transporting data, were not able to meet
16 the new workplace challenges that included easily moving
17 data between disparate applications and allowing users
18 to glean business insight from that data.

19 So this is a recognition by Microsoft that
20 while the dot doc and dot D-O-T worked well, as long as
21 you're staying within the Microsoft world, that if you
22 want to move data to other applications, and you want to
23 be able to find the business insight in the documents,
24 they needed something else.

25 Q. Is that contrary to the purposes of XML?

1 A. No. That's -- I'm not sure what you mean by
2 that.

3 Q. What are the purposes of using XML?

4 A. To be able to identify in the document itself
5 the meaning of the data represented in the content, what
6 those characters mean, and express it, when you save it
7 out in a form that somebody other than a Microsoft
8 application can read it and understand it, so you can
9 get that business insight.

10 Q. So the binary file formats wouldn't work for
11 that purpose?

12 A. They make it very difficult. In fact, for a
13 long period of time, they were totally proprietary and
14 unknown outside of Microsoft. But even though it's my
15 understanding they've now given some insight into it,
16 they still make it very difficult for a non-Microsoft
17 application to search through them and find the
18 information.

19 Q. Okay. So, Dr. Rhyne, did you find that using
20 Microsoft Word provides the document as the content of
21 the document and the metacode map of the document?

22 A. Yes, I did.

23 Q. So just to wrap up, in your opinion, did Word
24 2003 and Word 2007, opening an XML document with Custom
25 XML, do they -- does that satisfy the requirements of

1 Claim 14?

2 A. Yes. It meets every limitation.

3 Q. Now, Dr. Rhyne, you were here for opening
4 statements, right?

5 A. Yes.

6 Q. Do you understand that Microsoft has offered
7 several reasons why they do not infringe?

8 A. Yes.

9 Q. Do you agree with any of Microsoft's reasons?

10 A. Not these three.

11 Q. Okay. Well, let's go through Microsoft's --
12 the three -- the three arguments that Microsoft told the
13 jury in opening.

14 What was the first reason they gave?

15 A. As I understand it, Microsoft's attorney said
16 that Microsoft -- they say that Word doesn't use
17 metacodes. And the principal purpose -- focus of that
18 is that in storing the metacodes, they just store member
19 ID, and they don't, within that map of metacodes, put
20 the delimiters.

21 Q. Do you remember Microsoft showing the
22 metacode map from the patent specification during
23 opening?

24 A. Yes. This is the example. It's -- the term
25 in patent-ese is the preferred embodiment that they

1 placed in the patent. It's one of the pictures that's
2 in one of the columns of the patent.

3 Q. So what is the significance of providing this
4 example in the specification?

5 A. Well, it's a requirement for a patent that
6 you provide at least one example, and, in fact, the best
7 way you know at the time so that this ordinary skilled
8 person can come back in and reinvent or understand a way
9 to build your invention.

10 Q. Okay. And is your understanding of the law
11 that the proper way to do an infringement analysis is to
12 compare the accused product to the specification or to
13 the claims?

14 A. It's the latter.

15 MR. POWERS: Your Honor, I'll object.
16 Mr. -- Dr. Rhyne is not an expert on the law, and he's
17 not here to teach us about the law.

18 THE COURT: All right. Restate your
19 question.

20 Q. (By Mr. Campbell) Dr. Rhyne, let me rephrase.
21 Is your understanding of the law -- in providing your
22 opinion and your analysis, did you -- do you understand
23 that you are to apply the claims to the accused product
24 or the patent specification?

25 A. My understanding is that it's inappropriate

1 to consider the preferred embodiment as if it were a
2 claim. The claim language is what controls the way I
3 search for infringement or lack of infringement.

4 And the fact that this particular preferred
5 embodiment shows one way of doing it does not, in my --
6 to my understanding, mean that that's the only way to do
7 it within the scope of a claim.

8 Q. Okay. And what -- what was -- just remind
9 us. What the Court's construction of a metacode?

10 A. It's there at the bottom of the slide. It
11 says it's an individual instruction which controls the
12 interpretation of the content of the data.

13 Q. Well, what -- what here -- in the example
14 from the specification, what is the metacodes?

15 A. Well, you can see that it refers to this as a
16 metacode map, and it doesn't identify this column of
17 information as if it were metacodes. It refers to them
18 as elements, okay?

19 And when you look at that, the brackets on
20 either end of the word chapter, they don't tell you
21 anything about whether it's a chapter or a title. You
22 see exactly the same type of delimiters, beginning and
23 end marks, for every one of these entries that are
24 identified as elements.

25 So I believe that the Court's construction

1 has resolved any ambiguity here. The Court's
2 construction says the metacodes are chapter, title,
3 P-A-R-A. That's them.

4 Q. All right. Does the patent specification
5 provide any more explanation or discussion of these
6 delimiters?

7 A. It does. It says, by conversion -- by --
8 excuse me -- by convention, SGML uses the left V and the
9 right V or angle bracket characters as delimiters for
10 tags, which are outside the content.

11 For example, in a stream of characters like
12 this, the major, and then they have the left facing V,
13 and they came up with this -- I find it to be kind of a
14 nonsense term -- K word, another bracket, industry,
15 bracket, slash, K word, which says that's the end of the
16 K word.

17 The major K word, industry K word in Canada
18 is, and then they're through with the quote. They say
19 the bracket, K word, bracket, and bracket, slash, K
20 word, bracket, are used to mark the beginning and end of
21 a section of content, which is to be treated as a
22 K word.

23 The meaning of K word, whatever that is, is
24 up to the interpreter. That's telling you that the K
25 word is the metacode, because that's what controls the

1 interpretation of the content of the data, as the Court
2 has said.

3 Q. Well, can you kind of break that down for us,
4 how the tags and the delimiters work?

5 A. Well, here's the terminology as set forth in
6 the patent. There is -- and I'll use the member ID
7 example again.

8 The left and right brackets and the left
9 bracket and the slash are delimiters, whereas the member
10 ID, which appears twice, is the tag name, and that's the
11 metacode. The delimiters are not.

12 Q. The '449 patent specification also referenced
13 the SGML standard. Does -- is that right?

14 A. It does. It identifies it by name and
15 number.

16 Q. Okay. Does the SGML standard provide you any
17 guidance on this issue?

18 A. It did. This is International Standard --
19 ISO, that stands for the International Standards
20 Organization, a group that I have worked with, not in
21 the SGML area, but I've been on a number of ISO
22 committees. It's Patent No. 8879 -- excuse me --
23 Standard No. 8879.

24 And here's what they say in that standard.
25 They say the user locates each significant element of

1 the document and marks it with a pneumatic name -- they
2 refer to that as a generic identifier -- that he feels
3 best characterizes it.

4 Then they say, Each generic identifier is
5 delimited by a less-than symbol. A greater-than symbol
6 separates -- they say GI, but that's an acronym for
7 generic identifier -- separates the generic identifier
8 from any text that follows it. The combination of the
9 generic identifier and its delimiters is called a start
10 tag or an end tag.

11 I think, according to this, they make it
12 clear that the thing that identifies what we're dealing
13 with, what -- the thing that best characterizes this
14 number, for example, 23987, as a member ID is the
15 generic identifier, which is between the two V's.

16 Q. So the terms of this standard is the
17 generic identifier of the metacode?

18 A. Yes.

19 MR. CAMPBELL: For the record, that's
20 PX131.

21 Q. (By Mr. Campbell) So, Dr. Rhyne, do you agree
22 that Word does not use metacodes because it does not
23 store the delimiters?

24 A. No.

25 Q. What is Microsoft's next argument?

1 A. They say that Word does not map to places in
2 the input content stream.

3 Q. Let's go back to your slide that describes
4 how the compiling process is done.

5 Is there a difference between the input
6 content stream and the map content stream in the Court's
7 construction?

8 A. Yes. And let me remind the jury that the
9 list on the left is the construction or meaning assigned
10 to this portion of Claim 14 by the Court.

11 And the Court said that the first step would
12 be finding the positions of the metacodes in and
13 relative to an input content stream.

14 But then later it says you form unique
15 identifiers, which define the positions of the metacode
16 relative to the mapped content stream.

17 So there are two streams here.

18 Q. And does Microsoft Word provide a map to the
19 places in the mapped content stream?

20 A. Sure. That 2 and that 9. I explained to you
21 exactly how incorporating the anchor characters and the
22 paragraph symbol, they give you the 2 and the 9.

23 They tell you where to start looking, and
24 they find the anchor character that precedes the 23897,
25 and then they move over, and they give you the anchor

1 character that comes at the end of that particular
2 mapped member ID.

3 Q. Do you have another illustration of the
4 difference between the input content stream and the
5 mapped content stream?

6 A. I do. The input content stream was this
7 letter that was in so-called raw content. It has both
8 the content and the metacode.

9 And if you were to, for example, use that
10 stream to identify the position, you'd have to come over
11 here and count off -- you'd have a V, L-E-T-T-E-R,
12 another V, another V, M-E-M-B-E-R, I-D. So you would
13 have an account that included the metacodes.

14 But given the way that Microsoft Word works,
15 by the time you come over and count a 2 and a 9 over
16 here, in that sense, you have stripped out the metacodes
17 which were in the input content stream.

18 And so what you're pointing to with the 2 and
19 the 9 and the 10 and the 27 and so forth is the mapped
20 content, which is the CP stream over here.

21 Q. So the claims require mapping to the input
22 content stream?

23 A. No. They require mapping to the mapped
24 content stream, which is the CP stream.

25 Q. What's Microsoft's final argument why they do

1 not infringe?

2 A. If I understand it properly, is that Word
3 doesn't use a data structure, which I think their
4 position is that there needs to be something that one
5 would identify as a single data structure, as opposed to
6 a collection of data structures.

7 Q. Where is the requirement for the map to be a
8 data structure?

9 A. The term came in as part of the Court's claim
10 construction. The Court said that a map of metacodes
11 means a data structure that contains a plurality of
12 metacodes and their addresses of use corresponding to a
13 mapped content.

14 Q. Can you explain to us, Dr. Rhyne, what is a
15 data structure?

16 A. Well, you know, I could give you my
17 interpretation, but I've gone to a very meaningful
18 source, which is the same IEEE, and this is the 1992
19 edition came out just before the filing of the '449
20 application.

21 And it's entitled, The New IEEE Standard
22 Dictionary of Electrical and Electronics Terms. And
23 this is the definition that that dictionary provides for
24 the firm data structure, which is present in the Court's
25 construction.

1 Q. Is this the IEEE dictionary?

2 A. Yes. It's also known as IEEE Standard

3 No. 100-1992.

4 Q. Okay. And how does it define data structure?

5 A. It says that a data structure -- and you can
6 see the two parenthesis here. Every definition in this
7 dictionary -- and I'm very familiar with this dictionary
8 from my years of work within the IEEE -- they give you
9 what's called a domain of applicability.

10 And this data structure definition is of
11 relevance in the field of data management and software,
12 which certainly is relevant to what we're talking about
13 here.

14 And they say a physical or logical
15 relationship among data elements designed to support
16 specific data manipulation functions.

17 Q. So you mentioned that you're very familiar
18 with this dictionary. How do -- how do definitions get
19 into this dictionary?

20 A. They are pulled from a variety of national
21 and international standards, and standards such as those
22 are developed by groups of individuals who have specific
23 sets of expertise, such as myself in areas that I've
24 worked in.

25 There are, I think, at least two definitions

1 in there that I personally wrote as a member of a larger
2 group.

3 A typical group size would be 25 to 50 people
4 from a variety of companies and universities. And those
5 people get together periodically and hash out what that
6 standard is going to cover and exactly how they're going
7 to define terms like this.

8 This particular definition comes from an IEEE
9 standard -- I believe it's No. 610.12, which is a
10 glossary of software engineering terms.

11 And if you go to the standard, which I have,
12 and look it up, it says, this standard is intended to
13 provide meanings for terms that are commonly used in the
14 fields of data management and software.

15 And so this doesn't represent one person's
16 opinion, you know. It's not Mr. Webster or Mr. Funk or
17 even Mr. Wagnall. This is a collection -- in this case,
18 there were about 30 to 35 people from a variety of U.S.
19 companies who got together.

20 They propose a draft. That draft goes out in
21 the public, and they do what's called balloting.
22 Anybody who wants to can say, I like that, or I don't
23 like that, and eventually out will come something that
24 both the original body, the group agreed to. And in
25 this case, since it's an IEEE standard, the IEEE members

1 had an opportunity to vote on it.

2 So it's really a compendium of a lot of
3 ideas. It's -- and I think this is an appropriate
4 definition, certainly, in the fields of data management
5 and software.

6 Q. Based on the IEEE definition, is the metacode
7 map within Word a data structure?

8 A. It is. It's a data structure made up of
9 other data structures, which are linked together as data
10 elements using both physical and logical relationships,
11 okay?

12 And if I can get out of the chair again, I'll
13 make it -- I'll point out where those are.

14 MR. CAMPBELL: Your Honor, may Dr. Rhyne
15 approach the poster board again?

16 THE COURT: Yes, he may.

17 THE WITNESS: Thank you, sir.

18 A. If you recall, I identified this starting
19 point as a pointer. Within -- using Dr. Martin's little
20 magnifying glass, within what's actually at this
21 location in this structure, there's a pointer. And that
22 pointer is a physical location.

23 I told you it's like my street address. I
24 can give it to you exactly, 8407 Horse Mountain Cove.
25 There's no uncertainty there. It says exactly where it

1 is.

2 And in terms of memory, every location in
3 memory will have an address, and this is a physical
4 link.

5 Now, we got over here to where there was an
6 index that said go down and find Schema No. 0 and find
7 the fourth element in it. That's a logical
8 relationship. It doesn't tell you exactly.

9 But that's more like when somebody says, hey,
10 I am the third house on the left, if you can get to
11 Horse Mountain Cove, okay? That doesn't give you a
12 precise physical location, but it gives you an
13 unambiguous logical location.

14 And so in terms of the IEEE definition, what
15 we have are data elements. This guy, this guy, all
16 these things that are marked in green down here.

17 And some of them are linked with physical
18 location; some of them are linked by logical links; but,
19 collectively, they perform a specific data manipulation
20 function, which is to tell you that between 2 and 9,
21 there's these characters, 23987, that are a member ID.

22 Q. Dr. Rhyne, did you hear during opening
23 Microsoft's analogy about the data structure and the
24 rooms from different houses?

25 A. Yes, sir.

1 Q. Is that an appropriate analogy for a data
2 structure?

3 A. I don't think so.

4 Q. What's a more appropriate analogy?

5 A. Well, this is all one house. This is the
6 Word 2007 particular house. And it's common in a house
7 to walk down a hall, and you go down this hall to the
8 bedroom, and maybe you walk down another hall to get to
9 the laundry room.

10 I don't see anything here that implies that
11 I've taken a piece of data out of Microsoft Word and a
12 piece of data out of Microsoft Excel and a piece of data
13 out of one of the game programs that my son has worked
14 on and try to assemble them together into a data
15 structure.

16 Everything there is within Microsoft Word.
17 They're all in the same house. And the fact that
18 they're linked by hallways and directions telling it
19 where to go next, that's just a -- that's a cute
20 analogy, but it's not appropriate from a technical
21 analogy.

22 Q. More specifically, are all of these data
23 elements for supporting the data manipulation function
24 related to Custom XML?

25 A. Yes.

1 Q. So even more particularly, all of the rooms
2 in our house go to Custom XML.

3 A. Yes. I deparsed that. I'm sorry.

4 Q. That's okay. It's getting late.

5 Now, Dr. Rhyne, do you also understand that
6 Microsoft offered a definition of data structure during
7 the claim construction process?

8 A. I wasn't there, but I've read the transcript,
9 and I believe one of the Microsoft attorneys, if you
10 kind of clean up the transcript a little bit, offered
11 these two definitions.

12 Q. What are those definitions?

13 A. One was that a data structure were things
14 that are organized in such a way that they are related
15 to each other and addressed as a single entity or can be
16 addressed as a single entity.

17 And the second one was a collection of pieces
18 of data that are organized in a particular way.

19 Q. Does what you have identified as a map of the
20 metacodes, does that satisfy Microsoft's definition of
21 data structure?

22 A. Yes.

23 Q. How is it a collection of pieces of data that
24 are organized in a particular way?

25 A. Dr. Martin laid it out. It's all that green

1 stuff, okay? They've got pointers; they've got one
2 index; they are -- that structure is known. It was
3 defined by the software developers at Microsoft, and
4 there it is. It's traceable; it's understandable; it's
5 unambiguous.

6 Q. Dr. Rhyne, let's -- let's assume somebody
7 would not agree that that map of metacodes is a data
8 structure. What -- what is the next slide you're
9 presenting here?

10 A. Well, I -- you know, part of your question
11 leaves open the -- an explanation as to why they decided
12 that it wasn't, okay?

13 And the only one I can imagine is that if
14 they said, no, it's not a data structure, but it's one,
15 two, three, four, five, six -- it's seven data
16 structures, even though they're connected and even
17 though they're organized to do a specific function.
18 Then there's an option available, in looking at
19 infringement, that's called the Doctrine of Equivalents.
20 And I think that covers the situation where you were to
21 argue -- and it's something I don't agree with, but if
22 it were to be found that that's not a data structure but
23 a bunch of separate data structures, then I think the
24 difference between looking at those data structures as
25 pieces of a higher-level data structure and looking at

1 them as seven properly interconnected data structures
2 from the point of view of one of ordinary skill is
3 insubstantial.

4 Q. The Court will, of course, instruct the jury
5 on the law, but what is your understanding of the
6 Doctrine of Equivalents?

7 A. It's exactly this: That you can find
8 infringement if you've two things: One method and
9 another method that's different from the claim, but that
10 difference would be believed to be insubstantial in the
11 mind of those of ordinary skill.

12 Q. And as one of ordinary skill in the art, did
13 you find that the difference, if there is any, is
14 insubstantial?

15 A. Yes. I mean, anybody who's taken a course in
16 computer science, about the -- maybe the second course
17 you take, typically, is data structures. And they talk
18 about something that are commonly called abstract data
19 structures or abstract data elements.

20 And the thing you learn in that process is
21 that you can build up something that's bigger by
22 collecting together, in an appropriate way, things that
23 are smaller.

24 I can make a list out of things that are head
25 to tail connected, and then I can make a list of lists,

1 and I can make a list of lists of lists, and that's just
2 common computer science ways of dealing with data.

3 So if the jury were to consider that that's
4 really not a high-level data structure made up
5 admittedly by smaller data structures, but you've got to
6 count all seven of them, I still think that's a single
7 data structure, because that's what a data structure is.
8 It's a structure that holds data in a way that you can
9 understand it.

10 Q. In terms of Microsoft's last argument, do you
11 agree that Word does not use a data structure for the
12 metacode map?

13 A. If I understand the nature of the argument, I
14 don't agree with it at all.

15 Q. Dr. Rhyne, let's turn to Claim 18 of the '449
16 patent, the next asserted claim.

17 A. All right.

18 Q. Can you tell us in general the difference
19 between Claim 18 and Claim 14?

20 A. I was here again when I heard Judge Davis
21 read you some information in general about patent
22 claims, and he distinguished an independent claim from a
23 dependent claim.

24 And 18 is a dependent claim. And it says, A
25 method, as claimed in Claim 14, further comprising.

1 So what it means is, to infringe Claim 18,
2 you have to do everything that's laid out in Claim 14,
3 and then you have to do one more thing. In this case,
4 there's only one additional step.

5 And so I've already offered my opinion that
6 Claim 14 is infringed. So then the question here is
7 whether or not this additional step in Claim 18 is
8 infringed.

9 Q. Okay. What is that additional step in
10 Claim 18?

11 A. It says, Comparing the multiplicity of
12 metacodes in the map with a predetermined set of
13 criteria.

14 Q. In terms of XML, what is the predetermined
15 set of criteria?

16 A. It would be a schema, is the term that's
17 used. It would be -- and that schema has the list of
18 allowable metacodes that you can use, and it also
19 generally would have attributes.

20 For example, it will say a date has to -- you
21 know, you can't have a date that's -- you can't have
22 April the 20 -- April the 63rd, you know. You've got to
23 be in -- somewhere in 1 to 30, if you're going to have a
24 date in April.

25 And here's a presentation slide from a

1 Microsoft presentation entitled The Changing Face of
2 Office With XML. And here was a list of customer -- as
3 they say here, custom-defined XML schema that the author
4 of this slide was aware of.

5 I actually heard something about HL7 earlier
6 today, I think. It's a healthcare schema, and it's got
7 terms available in the healthcare industry.

8 There's another one called XBRL, which is
9 used in the finance community. There's one in the
10 insurance community and the healthcare community, a
11 different one, HIPAA. You know, if you -- you run into
12 that every time you go to the hospital, and you try to
13 figure out what documents they can give you and what
14 they can't.

15 And then there's one in the electronic
16 commerce area.

17 Now, that's -- those are defined across
18 entire industries.

19 On the other side, each company can define
20 its own industry. It's a little hard to read. That
21 first dark box says a company could define a schema for
22 its invoices or for its contracts or for its bills of
23 material.

24 And the last one just says dot, dot, dot, dot
25 dot, meaning others.

1 MR. CAMPBELL: For the record, that's
2 PX84.

3 Q. (By Mr. Campbell) Can you explain to us how
4 Microsoft Word compares a document to a schema?

5 A. Well, as it reads through the document and it
6 finds each of the metacodes, it looks at -- to see
7 whether or not that metacode is present in the attached
8 schema, in the schema that works with that document.
9 And as you can see, it creates what's called a
10 validation document by visiting each entry in the
11 metacode map, and it adds the mapped content to that
12 using the metacode map as a guide.

13 Then it validates by comparing the validation
14 document to the criteria set out in the schema.

15 As I say, if the schema has a type called
16 date, and it finds that within the content area that was
17 the date, it says April the 46th, 1995, that there is a
18 schema entry that says this has got to be a valid date.
19 It can't have April beyond, what, 30, I guess. And it
20 will report a list of any errors found.

21 That's what Microsoft Word does, and it's --
22 happens incrementally as it works its way through the
23 document as it's first loaded.

24 And further, if you have got the document in
25 there and you're editing it and you, say, modify the

1 content in such a way that you've accidentally changed
2 April the 15th to April the 51st, then there's an
3 incremental comparison to the schema, and it would say
4 that's not a legal date.

5 Q. Did you identify any Microsoft documents that
6 supports your opinion that Word compares metacodes to
7 the set of a criteria?

8 A. I have. Here's a document entitled Microsoft
9 Office System and XML: Bringing XML to the Desktop.
10 It says, Word 2003 is capable of understanding the
11 strict requirements of a schema document and will launch
12 validation errors when appropriate.

13 For example, if an element specifies that its
14 contents should be numeric, a validation error will
15 result from entering text. It just won't let you type
16 an A into a piece of content that's been marked as being
17 numeric only.

18 MR. CAMPBELL: And that's PX57.

19 Q. (By Mr. Campbell) And did you identify
20 another document -- Microsoft document that supports
21 your opinion?

22 A. Yes. This is entitled About XML Documents in
23 Word. It says, If the structure of the document
24 violates the rules of the schema, a purple wavy line
25 marks the spot in the document, and the XML structure

1 task pane reports the violation.

2 If you have used Word ever, you see sometimes
3 they'll mark spelling errors or grammar errors with
4 little wavy lines underneath the characters where the
5 spelling is wrong, or this says that if you've got an
6 XML document, they can put a purple line that says
7 that's just not a legal content for that particular
8 piece of the structured document.

9 MR. CAMPBELL: The record, that's PX390.

10 Q. (By Mr. Campbell) So, Dr. Rhyne, in your
11 opinion, does Word satisfy the requirements of Claim 18?

12 A. It does.

13 Q. Let's turn to Claim 20 of the '499 patent,
14 the final asserted claim. What kind of claim is this?

15 THE COURT: Counsel, before you go into
16 that one, let me just ask you how much longer you
17 anticipate for direct examination.

18 MR. CAMPBELL: For the entire direct,
19 probably 30 to 40 minutes. Claim 20 probably wouldn't
20 take very long.

21 THE COURT: Okay. Well, do you think can
22 get through it in 10 minutes or --

23 MR. CAMPBELL: Yes, Your Honor.

24 THE COURT: All right. Let's go ahead
25 and we'll go through that, and then we'll break for the

1 day.

2 MR. CAMPBELL: Very good.

3 Q. (By Mr. Campbell) Dr. Rhyne, what type of
4 claim is Claim 20?

5 A. Let me just say you've put me in the position
6 of the last speaker before the break to go to the
7 courtesy bar, but -- okay.

8 It's an independent claim. It has a
9 preamble, and then it has a number of steps. It is a
10 step claim. And fortunately, from a timing point of
11 view, it's very similar to Claim 14 in the scope that it
12 has.

13 Q. Okay. Let's -- let's start with the preamble
14 of Claim 20.

15 As you've noted, it's similar to Claim 14?

16 A. Yes. Claim 20 has a method for producing
17 from a document made up of metacodes and content --
18 that's a merged document -- a map of metacodes,
19 addresses of use, and map content.

20 And that's very similar to what you see in
21 Claim 14 as its preamble.

22 Q. Let's just remind the jury, did you find that
23 Microsoft Word produces a map of metacodes?

24 A. Yes.

25 Q. What are we -- what are you showing here?

1 A. I've shown them the same map that I have
2 here, and it includes the addresses of use; for example,
3 the 2 and the 9.

4 Q. Okay. And so, Dr. Rhyne, did you find that
5 the use of Microsoft Word satisfies the preamble of
6 Claim 20?

7 A. Yes.

8 Q. What are the next steps of Claim 20? And
9 maybe we can address the next four steps as a group.

10 A. Yes, we can, because they're very similar to
11 something we looked at in Claim 14.

12 You have to read the content of the document
13 until you find a metacode. You have to copy the content
14 and store it in the mapped content storage. You move it
15 over to the mapped content.

16 You note in the map the found metacode and
17 its position in the content, and then you repeat that
18 until you've been through the whole document.

19 Q. And let's -- let's look at that. Why are you
20 referring back to Claim 14 here?

21 A. Well, we had a step in Claim 14 that first
22 said, Providing the mapped content to the mapped content
23 storage means. That's very similar to part of Step B of
24 Claim 20.

25 And then it -- in Claim 14, we had compiling

1 a map of the metacodes in the distinct storage means by
2 locating, detecting, and addressing the metacodes.

3 So we've got some very similar language about
4 looking for them, reading until you find one, copying
5 them, noting, and then repeating the process.

6 Q. Well, let's go back then to your explanation
7 of how an XML document with Custom XML is opened in
8 Word.

9 A. Okay.

10 Q. How does -- how does this explanation that
11 you went through earlier map to the claim -- the claim
12 requirements of Claim 20?

13 A. Okay. You know, I previously mapped this to
14 the steps of Claim 14, so I'm going to do the same thing
15 now for Claim 20.

16 And here you can see reading matches
17 detecting the start tag, okay, until you find a
18 metacode, all right?

19 Then if you continue, copying the content,
20 putting it in the map content storage means copies and
21 stores -- I'm sorry -- copies and stores the content in
22 the CP stream, which is the mapped content stream.

23 Okay. Noting in the map the found metacode
24 and its position. That's what we did in the map of
25 metacodes. The 2, the 9, and following the green around

1 to member ID.

2 And then last, repeat the process until
3 you've been through the entire document.

4 Q. So, Dr. Rhyne, in your opinion, when Word
5 opens an XML document with Custom XML, does it satisfy
6 Steps A, B, C, and D of Claim 20?

7 A. Yes.

8 Q. All right. Let's look at the last step of
9 Claim 20. And how is this similar, or more
10 specifically, how is it different from Claim 14?

11 A. If you remember, when we looked at the last
12 step of Claim 14, the Judge gave us a construction that
13 it could be -- in Claim 14, you could provide the
14 document either with -- separately, or you could provide
15 it with the metacode map and the mapped content
16 together.

17 And Claim 20 requires that you do it
18 separately.

19 Q. And can you remind us, does Microsoft Word
20 provide the document as the content of the document
21 separately from the metacode map of the document?

22 A. Well, in memory, that's certainly true,
23 because we've got the separate map of metacodes, and
24 we -- trace this way over here, and we've got the mapped
25 content here.

1 So from -- in a memory point of view, that's
2 true.

3 Q. Okay. From a saving-to-disk point of view,
4 does -- do we have that as well?

5 A. Right. I already pointed out that binary
6 file formats that Microsoft uses with Microsoft Word,
7 which are the dot doc formats and the template format
8 template format, dot, D-O-T, those both keep the map of
9 metacodes and the mapped content separate.

10 THE COURT: All right, Counsel. If you
11 can wrap it up in one or two more questions, then we're
12 going to recess for the day.

13 MR. CAMPBELL: I can, Your Honor.

14 Q. (By Mr. Campbell) So, Dr. Rhyne, in your
15 opinion, does -- when Microsoft Word is used to open an
16 XML document with Custom XML, does it satisfy the last
17 step of Claim 20?

18 A. Yes, it does.

19 Q. And so just to wrap up with my last question,
20 in your opinion, does -- when Microsoft Word is used to
21 open an XML document with Custom XML, does that satisfy
22 all the steps of Claim 20?

23 A. Yes, it does.

24 THE COURT: All right. Thank you.

25 MR. CAMPBELL: Thank you.

1 THE COURT: All right, Ladies and
2 Gentlemen of the Jury. We've put in a long, hard day.
3 I want to thank you, and I know the attorneys on both
4 sides thank you for your attention. I know you've been
5 paying close attention today.

6 We're going to be recessed. We'll start
7 back at 9:00 o'clock in the morning. Please remember my
8 instructions not to discuss the case with anyone or do
9 any independent investigation or anything.

10 So you are relieved for the afternoon,
11 and we will see you back in the morning at 9:00 o'clock.

12 COURT SECURITY OFFICER: All rise.

13 (Jury out.)

14 THE COURT: Please be seated.

15 All right. I wanted to just advise the
16 parties that I had just received a note, one reason I
17 was rushing Mr. Campbell a little bit, Juror No. 8 was
18 not feeling well. So let him get on and get home and
19 see how he's feeling in the morning.

20 The parties wanted to be advised of their
21 time. The Plaintiff has used 6 hours and 15 minutes,
22 and the Defendant has used 1 hour and 55 minutes.

23 Let me ask Plaintiff what you anticipate,
24 as far as tomorrow and whether you'll be resting
25 tomorrow or not.

1 MR. CAWLEY: My best estimation, Your
2 Honor, is that if we were able to rest tomorrow, it
3 would be at the very end of the trial day.

4 THE COURT: Okay. All right. Very well.
5 So you do not anticipate that Microsoft would need to go
6 forward with their case tomorrow.

7 MR. CAWLEY: I think it's -- I mean,
8 obviously --

9 THE COURT: Highly unlikely.

10 MR. CAWLEY: -- I don't know how long
11 they're going to cross-examine Dr. Rhyme and so forth,
12 but I think it's quite unlikely.

13 THE COURT: Okay. Can you be prepared,
14 if it's necessary, to have people here?

15 MR. POWERS: Yes, we can.

16 THE COURT: Okay. I don't think it will
17 be, and if we're anywhere close to the day -- end of the
18 day, we'll probably go ahead and call it a day, but just
19 in case.

20 MR. POWERS: If I can ask, Counsel's been
21 saying they're calling Mr. Vulpe, but he's not been
22 identified to us yet as a witness. We assumed he was
23 going to be identified on Friday.

24 If they're saying that there's additional
25 witnesses, that they might actually close tomorrow, I'd

1 like to know who those witnesses are up until close, so
2 we can prepare for them.

3 THE COURT: All right.

4 MR. CAWLEY: Well, I'll certainly tell
5 you that. And they are Dr. Rhyne, obviously,
6 Dr. Martin, Mr. Wagner, Dr. Wecker, and Mr. Vulpe.

7 MR. POWERS: Thank you.

8 THE COURT: Okay. Very well.

9 All right. And then as far as
10 Defendant's case, if we don't start tomorrow afternoon,
11 which doesn't look likely, then we'll start on Friday
12 morning.

13 All right. Anything further from the
14 parties before we recess for the evening?

15 All right. Y'all have a good evening.
16 We'll see you tomorrow.

17 COURT SECURITY OFFICER: All rise.

18 (Court adjourned.)

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CERTIFICATION

I HEREBY CERTIFY that the foregoing is a true and correct transcript from the stenographic notes of the proceedings in the above-entitled matter to the best of my ability.

/s/_____
SUSAN SIMMONS, CSR
Official Court Reporter
State of Texas No.: 267
Expiration Date: 12/31/10

Date

/s/_____
JUDITH WERLINGER, CSR
Deputy Official Court Reporter
State of Texas No.: 731
Expiration Date 12/31/10

Date